THE JOURNAL

OF THE

Indiana State Medical Association

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA



ISSUED MONTHLY
UNDER THE DIRECTION OF THE COUNCIL

ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.
Editor and Manager

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VOLUME XIV FORT WAYNE, IND., JANUARY 15, 1921 NUMBER 1

ORIGINAL ARTICLES

THE ROLE OF THE ROENTGEN RAY IN DIAGNOSIS OF THE SURGICAL ABDOMEN WITH SPECIAL EMPHASIS ON ITS USE IN THE GALL BLADDER AND APPENDICEAL REGIONS*

B. R. KIRKLIN, M.D.
MUNCIE, INDIANA

The purpose of this paper is to bring to your attention the value of the Roentgen ray as an important factor in diagnosing pathological conditions in the abdomen and chest, laying special emphasis on the gall bladder and appendicial regions.

We are all aware of the fact that very few patients present themselves who have such definite and characteristic clinical findings that we can say positively that "right here lies this patient's trouble." If so, then please tell me why surgeons still operate for acute or chronic appendicitis or cholecystitis only to have the patient return after the operation with the same symptoms, and then after having a careful Roentgen ray examination, discover that the primary trouble was a renal calculus, chronic ulcer, or some other abdominal condition. Please do not misunderstand me in making the above statement, for I do not by any means mean this as disrespectful to the surgeon, for what surgeon has not made such mistakes. They are not superhuman. The point I do wish to make is: That we are not justified today in making the diagnosis of a surgical abdomen without having taken advantage of all the methods at our disposal which can throw light on the diagnosis. This was excusable a few years ago when a man had to depend largely upon his own ability, but now there are very few medical centers of any size that do not have a trained and competent Roentgenologist —and we must insist that he be competent, for if he is not, the Roentgen ray will do more harm than good by the incompetent man arriving at the wrong conclusions. Therefore, I propose to try to prove to you that the Roentgenologist can be of invaluable assistance in helping to arrive at conclusions concerning a pathological gall bladder or appendix.

It is true that a great many patients are examined by Roentgen ray methods without the Roentgen ray alone revealing the correct diagnosis, but, on the other hand, if there be any doubt whatsoever concerning the correct diagnosis, the procedure is certainly justified if certain doubtful conditions have been eliminated by employing them, and the surgeon and family physician have been saved possible embarrassment later on.

I believe you will all agree with me that any of the following conditions should be confirmed by the X-ray, viz: cardiospasm; gastric, duodenal or jejunal ulcer; pyloric stenosis; gastric or intestinal neoplasm with the possible exception of carcinoma of the rectum; urinary calculus; intestinal obstruction; gastroptosis; enteroptosis; nephroptosis; etc. I wish to state for the benefit of those who are still skeptical concerning the value of the Roentgen ray in any of the above named conditions that it is my opinion, that if the findings are correctly interpreted, the Roentgen ray methods are of more value than any other one method at our disposal in determining any of the above named conditions. For this reason, I shall only mention them and refer to them later by showing a few slides and reporting some cases, and confine the most of my time to presenting that phase of Roentgenology that pertains to the diagnosis of pathology of the gall bladder and appendix.

GALL BLADDER

Up to a very few years ago gall stones were detected by the Roentgenologist in such small percentage of the suspected cases that most

* Presented before the Indiana State Medical Association at the South Bend session, September, 1920.

Roentgenologists did not recommend Roentgen ray examinations, and only made them when urged to do so. Men like George, Case and L. G. Cole, however, found that gall stones containing calcium could be detected much more frequently than they had suspected, which stimulated the search. While as yet few Roentgenologists have published their reports, the general opinion is that from sixty to ninety per cent of gall stones will show. George and Leonard claim to demonstrate from eighty-five to ninety-five per cent. During the past eighteen months we have been able to show over ninety per cent of the pathological gall bladders that have been examined by Roentgen methods in our laboratory and later operated.

Gall stones fall into one of two groups: (1) Stones which contain no calcium, and (2) stones which contain considerable calcium. The dense calcareous gall stones are far in the minority, but are very easily demonstrated when present. This fact may account for the reason why the study of gall stones by Roentgen ray methods, has made so little progress. By far the greater number of gall stones consist of a cholesterine nucleus with a calcareous coating. When the calcareous deposit is thin, which is true of about fifty per cent of the cases, the stones are difficult to detect. It is considered impossible to demonstrate a pure cholesterine stone; but it is probably safe to say that an absolutely pure cholesterine stone is a rare entity. As you no doubt can see, the question of Roentgen ray diagnosis of gall stones and pathological gall bladders depends first, upon the ability of the Roentgenologist to use the correct technique in demonstrating them on the plates, and secondly, to correctly interpret the various shadows produced by pathological gall bladders, and the stones with very small amount of calcareous deposit for these are the stones which are encountered most.

A careful study of the clinical history of cases in which gall stones are definitely shown by Roentgen methods, reveals the futility of expecting the classical gall bladder symptoms to agree with the Roentgen diagnosis. Our present experience indicates that only when a gall stone passes or engages does it cause the typical gall stone colic, and this is relatively rare compared with the frequency of gall stones.

The clinical indication of gall stones compare with those of pyelitis except that we cannot detect the presence of pus in the stools as readily as we can detect it in the urine. Some of the cases of gall stones and cholecystitis give no characteristic symptoms of gall bladder disease but are associated with obscure gastro-intestinal symptoms.

We not only attempt to demonstrate gall stones but also attempt to demonstrate any pathological gall bladder. We are able by the density of the gall bladder shadow to detect a thickened gall bladder filled with bile of a very high specific gravity and by giving the patient a barium meal we can demonstrate a cholecystitis with adhesions and also can frequently outline the pressure of the gall bladder against the stomach, duodenum or colon.

Even if no suspicious shadows be present, a number of Roentgen ray findings following a barium meal are of assistance in the diagnosis of pathological gall bladder, with or without stones, namely:

1. Hepatofixation of the stomach, the pyloric region being drawn to the right and upward in a significant manner.

2. A definite small area of pain to pressure accurately localized to the outer side of the shadow of the duodenum. It is a characteristic of such cases that there is a lag in the emptying of the duodenum.

3. The presence of Riedel's lobe of the liver, when demonstrable following gas distention of the stomach and colon, is another contributory sign of gall bladder disease, in which jaundice is not present. This sign may be of special value.

4. The hepatic flexure of the colon may occupy an unusually high position, a further suggestion of gall bladder disease.

5. The emptying time of the stomach following a barium meal is usually much shortened, and the outline of the duodenum is well seen owing to a delay in the emptying time of the duodenum or to a too rapid out-pouring of the stomach contents through the duodenum. It was formerly supposed that this unusual visibility of the duodenum strongly suggested duodenal ulcer, but Case states that in his experience it may occur in any duodenal affection or in gall bladder disease.

It quite often happens that the trained Roentgenologist will make a diagnosis of pathological gall bladder with or without stones, only to have the surgeon inform him that he palpated the gall bladder at operation, and found it normal. I wish to say here that I do not believe that the Roentgen evidence or any other evidence should be considered wrong until the accused gall bladder has been removed and submitted to a histological examination, for is it not a fact that it is impossible for the average surgeon to make a diagnosis of normal gall bladder by palpation alone? I believe that it has been definitely proven that it is. Dodd has reported a case from the Massachusetts General Hospital where both the surgeon at operation and the pathologist at post mortem failed to palpate the stones which were later found in the distended bladder.

By means of the special technique for making and interpreting Roentgen plates, a positive diagnosis may be made in so many cases that the negative diagnosis has become of considerable significance.

George and Leonard state that Roentgen methods of diagnosing pathological gall bladders has become so accurate that if there be no direct Roentgen evidence of gall stones, or indirect evidence of adhesions involving the stomach, cap, duodenum or colon, as a result of cholecystitis, the surgeon should have a preponderance of clinical evidence as a warrant in operating for gall stones.

APPENDIX

In taking up the region of the appendix, we naturally have to consider the appendix, cecum and terminal ileum.

It seems to me that all that is necessary for one to be convinced of the importance of the Roentgen methods in diagnosing pathological conditions of the appendix is to study some of these appendices by these methods and then follow them to the operating table. The results are most gratifying. It goes without saying that the Roentgen ray is of no special importance in acute appendicitis, in fact, it is contraindicated, for, fortunately the clinical picture is usually definite enough. It is sometimes advisable, however, to eliminate urinary calculus or carcinoma of caecum.

In some cases of acute, left-sided pain, where we are suspicious of transposed viscera, it is a very simple matter to use the barium enema and eliminate any guessing.

The study of the appendix by Roentgen methods must be done very carefully and thoroughly. The horizontal and vertical fluoroscopes are very valuable assets, especially for palpating and determining adhesions and tenderness. It is easy if the appendix fills, *and every normal appendix will fill,* to palpate the appendix and observe it in action, as it were. It is certainly an advantage over palpating blindly in the region of McBurney's point, for we know, with the aid of the fluoroscope, whether or not we are directly over the appendix. In some cases, especially the retrocecal appendices, we are unable to demonstrate the appendix, except with the fluoroscope.

As is true in every other division of Roentgenology, it is first necessary that the Roentgenologist familiarize himself with the normal appendix and the normal variations, before he can recognize the pathological appendix. Because the appendix fills and is visualized does not mean that we are dealing with a pathological appendix, for as I have stated above—every *normal* appendix will fill. George states that there is no exception to that statement. I have found, however, in my very limited experience, that there may be possibly one exception. That is, the atrophic appendix in old people. Their appendices may be obliterated and still be innocent.

The appendix is made visible by the meal in its lumen. Its lumen should be regular and at least as wide at its proximal end as its distal, in order to properly drain. It may lie in most any position about the cecum but should be free. If it be free it may be found in one position on one plate and in a different position on a second plate made just a few minutes later. It should be freely movable to manual palpation and should be empty when the cecum has emptied. It is interesting to study the normal appendix of a child under the fluoroscope and watch it intermittently fill and empty and move about in the abdomen. It is very essential not to mistake a small residue in the terminal ileum for the appendix shadow.

I have found stereoscopic plates to be of great assistance in studying the appendiceal region, in fact the whole gastro-intestinal tract.

Dr. A. W. George, of Boston, states that a chronic appendicitis may be shown by:

(1) Absence of the appendix shadow. (2) Abnormal conditions of position, shape, and size of the lumen. (3) Concretions. (4) Tender point. (5) Adhesions.

We quite often find associated with a chronic appendicitis a stasis of the terminal ileum. The terminal ileum has been a fertile field for study during the past few years. One cannot be interested in this part of the alimentary tract without studying the results of the investigations of Lane, Case, Jordan, Bambridge and others. Case has written a great deal on stasis of the ileum, laying special emphasis upon the study of the ileocecal valve. He is of the opinion that there is an incompetency of the ileocecal valve if any of the barium enema gets by the valve. In studying the ileocecal region, it is important to examine both after the ingestion of the barium meal and after the injection of the barium enema.

I think the X-ray investigation of any part of the alimentary tract must be incomplete unless it includes a careful study of at least the entire digestive tract and chest.

ROUTINE EXAMINATION OF CHEST

Groover and Christie of Washington, D. C., report that out of 1300 cases examined by Roentgen methods in two years a chest examination by the fluoroscope and stereoscopic plates were made in 1111 cases. In fifteen per cent of all the cases so examined, definite pathology was found in the chest, and they were only able

to demonstrate actual pathology in the gastro-intestinal tract in thirty-nine per cent or only twice as many gastro-intestinal lesions as chest lesions in 1300 cases referred in for gastro-intestinal study.

TECHNIQUE

It is our practice when a patient presents himself for examination to first make several plates of the gall bladder and also the kidneys if at all doubtful about them. Then we fluoroscope the chest, and if there be anything at all suspicious, we make a set of steroscopic plates for further study. At this time we give the patient the opaque meal and after carefully studying the stomach and duodenum under the fluoroscope, several plates are made. The patient is asked to return at three, six, eighteen and twenty-four hours for further observations. If there is still part of the meal present at twenty-four hours he is asked to return again until we are able to determine all we can concerning his case. If indicated, an opaque enema is also given and a careful fluoroscopic and plate study of the colon are made.

CONCLUSIONS

In conclusion, let me say that it is my opinion that by the skillful use of the Roentgen methods alone, in the proper hands, it is possible to diagnose from eighty to ninety-five per cent of all pathological gall bladders and appendices. I do not think it is fair to condemn the use of the Roentgen methods just because every man who possesses an X-ray machine doesn't show gall stones, and gall bladder pathology, or pathological appendices, as it may be the man and not the X-ray that is at fault. It would not surprise me to know that one hundred per cent of the pathological gall bladders are shown on our X-ray plates, but to date, no one has developed his art to the extent that he can correctly recognize and interpret these shadows as such. I believe it is possible, however, and that some time in the future someone will develop this specialty to the point where we can demonstrate a still much higher percentage of these conditions.

As in all other branches of Roentgenology, the most important factor in this work is the correct interpretation of the various shadows as seen on our X-ray plates and screens. It is also necessary to be quite conservative in interpreting our X-ray findings, for the over enthusiastic man is very apt to do serious harm by arriving at the wrong conclusions in his enthusiasm.

CASE REPORTS

GALL BLADDER

CASE No. 1194: Female adult.
Roentgen conclusions: Large pendulous gall bladder with stone in cystic duct and at least nine small gall stones free in bladder. Pathological appendix. Operated by Dr. C. M. Mix.
Operative findings: Roentgen diagnosis confirmed. Ten gall stones were found.

CASE No. 1074: Female young adult.
Roentgen conclusions: Pathological gall bladder and appendix. Probable gall stones. Operated by Dr. C. M. Mix.
Operative findings: Gall bladder thickened. Sixteen gall stones size of ordinary dice. Appendix obliterated and bulbous.

CASE No. 1416: Male adult.
Roentgen conclusions: Pathological gall bladder with large stone. Pathological appendix. Undoubtedly a surgical abdomen. Operated by Dr. Ed Clark, Indianapolis.
Operative findings: Large thickened gall bladder with stone corresponding in size to one seen by Roentgen examination. Five small gall stones. Pathological adherent appendix. Surgeon was doubtful about the appendix in this case until it was explored.

CASE No. 1299: Female adult.
Roentgen conclusions: Pathological gall bladder with stones. Pathological appendix. Operated by Dr. C. M. Mix.
Operative findings: Large thickened gall bladder filled with small stones. Large adherent appendix.

CASE No. 1814: Female adult.
Had been diagnosed "Lack of Acid" and treated for same by two large medical centers where X-ray was not used to aid in diagnosis of gall bladder disease.
Roentgen conclusions: Pathological gall bladder with stones. Chronic inactive pulmonary tuberculosis.
Operative findings: Not operated, on account of pulmonary findings.

CASE No. 1883: Female adult.
Roentgen conclusions: Pathological gall bladder filled with stones. Operated by Dr. C. M. Mix.
Operative findings: Thickened gall bladder with many small stones.

CASE No. 1964: Female adult.
Roentgen conclusions: Pathological gall bladder filled with stones. Pathological adherent appendix. Operated by Dr. Geo. R. Andrews.
Operative findings: Gall bladder surrounded by adhesions and contained 32 sharp-edged stones. One stone in duct. Appendix densely adherent—unquestionably pathological.

CASE No. 2203: Female adult.
Roentgen conclusions: Pathological gall bladder with stones and pathological appendix. Operated by Dr. E. H. Clauser.
Operative findings: Firm adhesions involving gall bladder, liver and pylorus. Gall bladder

contained two stones 1 cm. in diameter and several smaller stones. Appendix not explored.

CASE No. 2408: Female adult.
Referred in with clinical diagnosis of left renal pathology.
Roentgen conclusions: Pathological gall bladder with large stone.
Operative findings: Not operated. (Refused.)

CASE No. 2794: Female adult.
Roentgen conclusions: Pathological gall bladder with two large stones. Operated by Dr. C. M. Mix.
Operative findings: Roentgen conclusions confirmed.

APPENDIX

CASE No. 3020: Male young adult.
Roentgen conclusions: Normal appendix.
Operative findings: Roentgen conclusions confirmed.

CASE No. 1029: Female adult.
Roentgen conclusions: Pathological appendix. Operated by Dr. Will C. Moore.
Operative findings: Chronic appendix. Constriction at base. Bulbous end.

CASE No. 1080: Female young adult.
Roentgen conclusions: Evidence of pathological appendix and stasis of terminal ileum. Operated by Dr. Will C. Moore.
Operative findings: Chronic appendix with concretions.

CASE No. 1216: Male adult.
Roentgen conclusions: Pathological adherent appendix with prolapse of ascending colon. Suspicious evidence of pathological gall bladder. Operated by Dr. Goethe Link, Indianapolis.
Operative findings: Chronic appendix with adhesions involving the cecum and ascending colon. Gall bladder normal to palpation.

CASE No. 1942: Female adult.
Roentgen conclusions: Pathological appendix, chronic inactive pulmonary tuberculosis.
Operative findings: Not operated, on account of pulmonary findings.
Pulmonary findings confirmed by Drs. F. G. Jackson and Fred Glascock, Muncie.

CASE No. 2060: Young male adult.
Roentgen conclusions: Retroperitoneal abscess in lower right abdomen—appendix probably involved. Operated by Drs. Mix and E. H. Clauser.
Operative findings: Roentgen conclusions confirmed.

CASE No. 1236: Male adult.
Referred in with clinical diagnosis of gastric carcinoma.
Roentgen conclusions: Pathological appendix with dense adhesions involving cecum. Suspicious evidence of pathological gall bladder. Operated at Mayo Clinic.
Operative findings: Chronic hypertrophic appendix, densely adherent, probably accounting for patient's symptoms. Gall bladder incision revealed a few adhesions about gall bladder.

ASSOCIATED PATHOLOGY

CASE No. 1207: Female adult.
Referred in with clinical diagnosis of gall bladder disease.
Roentgen conclusions: Stomach, duodenum and gall bladder negative. Left kidney shadow considerably enlarged. Chronic active pulmonary tuberculosis, complicated with pleuritis involving right base, which is probably accounting for patient's present symptoms.
Above conclusions confirmed by Dr. Alfred Henry of Indianapolis.

CASE No. 1456: Male young adult.
Roentgen conclusions: Pathological appendix. Suspicious of old pyloric ulcer probably healed. Chronic inactive pulmonary tuberculosis involving left upper lobe. Operated by Dr. J. R. Eastman, Indianapolis.
Operative findings: Pathological appendix. Tuberculosis peritonitis. Mass in region of pylorus. Owing to tuberculosis peritonitis surgeon thought best to let pylorus alone. Patient developed acute miliary tuberculosis shortly after operation.

DISCUSSION

DR. WILLIAM DAVIDSON (Evansville): I was much interested in a case a number of years ago which was brought to my attention in a rather peculiar way in order to corroborate diagnosis. It has happened a number of times since, but this first case was a young man, a mining engineer who had had some intestinal trouble. He reported that he had had no fever, but he had peculiar attacks of pain. He had been treated four or five months for colitis, had had repeated flushings and various medicaments, and when I saw him he was very much amazed at a diagnosis of appendicitis. In order to corroborate I decided to make plates. They showed the appendix adherent, and along the outer posterior aspect the cecum showed a beautiful contraction drawing the hepatic flexure down with a ballooning above and below. He said he had frequently used as much as a gallon or two of water for enemas, he would pass one-fourth or one-half of this amount, then within a half hour he would have sudden pain with a rush of fluid and would expel the remaining part. The operation showed an ulcer just ex-

actly as the X-ray operator had shown it.

Another case recently showed very similar results, but the patient would not accept the diagnosis. She refused to believe that she had had an appendicitis for ten years. The plate showed the injection of the appendix producing a kinking inward of the cecum, a drawing around of the terminal ileum, with the tip of the appendix adhered to the mesentery. The diagnosis was positive and the operation showed the condition exactly as the plate.

Another case of gall bladder trouble with persistent stomach symptoms showed the pylorus drawn over the gall bladder and attached, as the paper said, in a semi-circular manner. The lesser curvature was rather distorted. The operation showed exactly the same condition.

I believe, as the essayist has said, that this affords a valuable field for diagnosis, and particularly for further investigation.

DR. DAVID ROSS (Indianapolis): It certainly is encouraging to see the progress that Roentgen ray diagnosis has made in the last few years. It seems only yesterday that Doctor A. M. Cole said to me, "Do you know they are telling us that with the aid of the Roentgen ray we will be able to diagnose cancer in its incipient stages, or at least give such corroborative evidence that diagnosis will be possible?" It seemed wonderful to him, although he had been working along that line and doing good work. And so it comes to each of us from time to time, the new things that are being shown with the X-ray. However, we do not want to make the mistake of feeling that we have in the X-ray a complete means of diagnosis. The Roentgenologist does not claim that, he does not want that. It should fit into the whole picture and be corroborative. It is not right or fair that we send a patient for X-ray examination without any statement of what has been found by clinical observation and study. Neither is it fair after the Roentgenologist has helped us out, to fail to report back to him what we have found on operative procedure. If medicine in its broadest sense is to go where we want it to go, there must be absolutely perfect and complete team work—the Roentgenologist, the surgeon, the laboratory man with his wonderful aids in diagnosis, the internist—we must not forget any of them. It is all one big scheme and we should think as much of these men as they do of us.

DR. CHARLES W. HAYWOOD (Elkhart): It was emphasized at the meeting of the American Roentgen Ray Society last week that the X-ray man should be furnished with a complete clinical history of the case, that he should not be asked to take a stomach picture or a chest picture, or whatever it might be, without a complete clinical history; that he should not be limited to taking just the picture the clinician asks him to take, if he should find something further necessary—that he should use his judgment.

There was a great deal said at that meeting by the men who are doing pneumoperitoneum. These men skigraphed patients in the upright position and the plates showed the liver shadow and the shadow of the right kidney, and in many cases the gall bladder hung between the two shadows.

DR. H. O. PANTZER (Indianapolis): I wish to endorse fully what has been said in praise of the wonderful progress made by the X-ray as shown by Dr. Kirklin's plates, and then especially to emphasize what is of fundamental importance in their reading, though not yet fully appreciated. Every one of the X-ray pictures presented to us—and I wish time allowed that I might point it out particularly in each—shows gross anatomical irregularities in form, size, location, and interrelation of the different organs presented in the pictures. Obviously such anatomical irregularities must include disturbances of function, and secondarily become seats of infection. Such recognized disease entities as cholecystitis, appendicitis, intestinal obstruction, pancreatitis, etc., should be regarded as final critical developments. They must have been preceded by clinical symptoms of sufficient gravity and mark which in future cases with the illustrative adjuvant of the X-ray we may detect before the acute crises arise. Then the surgical anticipation of the critical stage will make for safety of surgery, and also will obviate the more or less continuous loss of function and systemic strength which do occur in the long years leading up to a final crisis. Too, the simple removal of the gall bladder, or appendix, or gastric or duodenal ulcer, etc., in many cases is not followed by satisfactory relief of the preoperative suffering. This, I have become convinced, can be changed by the simultaneous operation upon anatomical irregularities owing to peritoneal bands and membranes. I have practiced this more extensive surgery through many years with ever growing confidence. May I be permitted here to state that when Jackson reported his first case of membranous compression of the ascending colon, in which he determined that the whole ascending colon required removal, and had practiced this procedure, I had operated successfully upon several such cases by the simple discision of such membranes and bands.

DR. ALFRED S. JAEGER (Indianapolis): It is needless to compliment the essayist on the beautiful pictures he has presented—they show for themselves. Nor is there any need to discuss what the X-ray shows in checking up a diag-

nosis. But the X-ray frequently does more. It corrects us in diagnosis. Where the clinical symptoms point, we will say, to appendix or gall bladder, the X-ray will show the gall bladder and appendix normal. As for instance, two years ago a patient presented herself to me who had been operated for appendicitis, but the operation gave no relief. She had the distinct clinical entity which so frequently goes with gall bladder colic. In view of the fact that the appendix had been removed, there was a possibility of post-operative adhesions. Gastric analysis was negative; palpation was negative. We had her X-rayed by Doctor Beeler. The gastro-intestinal picture was absolutely negative. Then we thought of impacted stones, a kink, a thickened ureter at the site of the appendix, possible pressure of some foreign body on the gall bladder. The wizard of the cystoscope, Doctor Erdman, did the preliminary work of injecting the ureter and kidney, and when he came to the point where she had complained of pain at the level of the operation scar he said, "We have an obstruction of some kind there." He was able to overcome the obstruction and make a passageway and inject the pelvis of the kidney, and the picture then taken showed the kidney had changed its position and was pressing on the gall bladder and there was a thickening at the level of the appendiceal site. We did a fixation of the kidney and the gall bladder symptoms were relieved. However, her condition was not sufficiently good at the time of the operation to allow us to take the chance of going into the abdomen for any further work, and that pain still remains. But here was a case where the X-ray set us right, showing that we did not have gall bladder trouble but some other condition which caused the trouble.

DR. B. R. KIRKLIN (Muncie): I wish to emphasize what Dr. Ross has said, namely: That we should not depend upon the X-ray alone to make a diagnosis in every case. I do think, however, that the X-ray is as important as any other one thing in making a diagnosis of a surgical abdomen. It has its place, but there are other adjuncts equally as important.

I also want to agree with what one doctor has just said concerning the Roentgenologist being furnished with a complete history in every case referred for examination. It is my practice that if the physician referring the case does not furnish us with a complete history, then we get the history ourselves. I do not believe that we are stepping on the family physician's toes in asking for, or taking a complete history in every case. In fact, it seems to me that the Roentgenologist should consider himself a medical consultant, for in so doing he is better able intelligently to interpret all his Roentgen findings.

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THE PHYSICIAN

"THE MEDICAL SOCIETY"*

BY

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One can only speculate as to when the first Medical Society was organized. The high attainment of medicine in the days of Hippocrates justifies the belief that conferences must have frequently occurred amongst his followers. It may also be assumed that the contemporaries of Galen were wont to meet and discuss medical problems. During the reign of the dark ages and the period of the alchemists there was no attempt at organization worthy the name.

The advent of Baconian philosophy brought a new birth of scientific initiative. Deductive reasoning not merely laid substantial foundations for progress, but builded upon them new superstructures — remarkable first because so different from what had preceded, and equally remarkable because of the builders who wrought scientific miracles. In this catagory were the discoveries in physics by Galvani, Volta and Franklin; and in chemistry those by Priestley, Watt, Dalton and Davy, which set the world aflame with expectancy.

Medicine shared in this golden era of scientific progress, producing also many great characters. Among these were Malpighi, in Italy; Borhaave and Haller, in Germany; Paré and Laennec, in France; Sydenham, Harvey, Hunter and Jenner, in England; and Rush, in America.

During this extraordinary period of scientific awakening in the eighteenth century, there is abundant evidence to show that there was the liveliest interest in the newer medical problems. Promulgated views and controversies (often most bitter in character) generally took the form of a book or pamphlet; or of manifestoes from medical schools, for most of the medical leaders were either teachers or favored by royal patronage. Under this wholesome, at times acrid agitation, the profession gradually freed itself from the domination of ecclesiastics, bar-

*Ninth of a series of articles by Dr. Wynn which will appear regularly in The Journal.

bers and uneducated midwives. The older order of instruction under private preceptors, gave place to better organized medical schools where the fundamental branches were systematically taught. The close of the eighteenth century saw a goodly number of noteworthy medical colleges established in Europe, England and America. In our own country before 1800 there were four such institutions, which have continued down to our own day.

One of the widespread tendencies of the time was the disposition to form organizations for friendly intercourse and mutual improvement. The same ferment which was working out democracy in the new world, was bringing about different reactions in the Old World; stimulating scientific investigation, arousing the moral consciousness, and bringing to pass a more friendly co-operation amongst men.

Out of such an atmosphere arose a widespread disposition to organize societies with the avowed objects of promoting friendly intercourse amongst scientific workers, and stimulating advancement in the basic sciences—medicine included. Such were the German Scientific and Medical Association, founded in 1652; the London Royal Society for the Promotion of Science, 1662; the Academy of Sciences in France, 1665; and the Academy of Medicine, 1820; in America, the Massachusetts State Medical Society, 1781, and the Philadelphia College of Physicians and Surgeons, in 1787. These organizations continue an honorable existence, fulfilling in the highest degree the noble aims and purposes of their founders.

It will be noted that these first attempts at medical organization were amongst the notables of the time—the writers and teachers of medicine. It was in no sense a widespread effort to organize the mass of the profession for purposes of friendly intercourse and mutual instruction. The medical society as we know it is a product of modern times—one of the fruits of the diffusion of knowledge and the spread of democracy. In the very nature of things, therefore, medical organization of the rank and file of the profession has attained larger growth in America than anywhere else in the world.

The first noteworthy attempt in Europe to organize the medical profession in a larger, democratic sense, was in 1832, when the Provincial Medical and Surgical Association was established at Worcester, England. Under the leadership of Charles Hastings, fifty medical men from the leading provincial towns of England assembled and perfected this organization. In 1856 its name was changed to that of British Medical Association, a title which it has borne to the present time, attaining by its growth and influence, world-wide distinction.

At the same time that general organization of the medical profession was taking place in England, a similar movement was on foot in America. During the first half of the nineteenth century, medical colleges and pseudo-medical colleges had multiplied to an unwarranted extent, flooding the country with doctors, far in excess of the need of the time. Some of these institutions were mere diploma mills, conferring degrees which legitimized the holders in the public mind, but which were highly discreditable to the profession. Better men in the profession everywhere deplored the evil trend and sought to bring about its correction. This sentiment crystalized formally in 1845, when under the leadership of N. S. Davis, the New York Medical Society adopted a resolution issuing a call for a national convention of delegates from all the medical colleges and societies throughout the Union. They assembled in New York City May 5, 1846. Thus was born the American Medical Association. Its remarkable growth all these strenuous years has been along almost the exact lines set forth in the six propositions of reform, promulgated by its illustrious founders. This much in brief historic review.

A consideration of medical society growth in quite recent years reveals interesting features. As previously stated the earlier organizations naturally brought together the more progressive leaders in medicine, chiefly teachers and writers. The high conditions of admission made the prevailing organizations rather exclusive in membership personnel. This type of society exists today in the Philadelphia College of Physicians, the American College of Surgeons, the American College of Physicians and the numerous organizations of those engaged in special work. Such societies are extremely important in promoting scientific researches, technical improvements and advancement in the methods of practice. The newest things are brought to these forums for searching and unsparing criticism. The most acute and painstaking workers find their wits sharpened and their knowledge improved. Errors are laid bare and truths made plain.

So beneficent for good are these medical associations of specialists that one hesitates to suggest the possibility of any faulty trend in their influence. Yet such there are. Not a few of those engaged in this sort of society work develop an attitude of self-sufficiency and class superiority, occasionally so offensive as to merit the term arrogance. They become Pharisees in medicine, walking by on the other side of the road and disdaining the company of the common folk in the profession. They select only the company of the elect in science. They are generally persons of fine but exclusive mentality. Curiously they are slow to learn that their pet, new ideas may grow best in the less

tilled fields of the common profession. This fact was borne in deeply upon the writer in his long connection with the Scientific Exhibit of the American Medical Association. At first there were many scientific investigators of the highest distinction, who were very loath to descend from their high station as research workers. To their way of thinking scientific demonstrations of research exhibits to the untutored practitioner would not be understood and what would it avail? Yet when once they came down from the mountaintop of isolation and exclusiveness, into the fertile valley of common practitioners, they were surprised to find a soil in which their ideas flourished.

Who is so prejudiced as to deny to specialism chief credit for modern progress in medicine? Just as certain is it, however, that specialism is not an unmixed blessing. Besides depleting to an alarming extent the ranks of general practice, its trend is toward materialism. It brings about narrowing of the professional vision. It often fails to observe the disease complex in its entirety and coordinate the particular lesion with the functioning organism as a whole. Such are some of the pits of error into which the specialist is apt to fall. His protection and salvation lie in frequent contact and discussions with practitioners as he encounters them in the general medical society.

In this connection it is proper to discuss the relationship of medical college faculties to local medical associations. Nothing could be farther from the writer's intent than condemnation of American Medical Colleges which at the present time are probably the best in the world—thanks in large measure to the activities of the American Medical Association. The purpose is to point out a prevailing condition which is prejudicial to the best interests of the profession in general. In almost every city where there is a well-manned and equipped medical school, there is likely to be found a college and non-college group—the "ins" and "outs," sometimes referred to as the aristocrats and plebeians. This line of cleavage is quite apt to show itself in medical society politics. Those in the common walks of practice are perhaps too prone to view the college professor as a Pharisee, robed in exclusiveness like the holder of public office or the arrogant rich. Sometimes the criticism is just; more frequently it is far-fetched. There is no justification for the tendency often manifest in this connection to draw class distinctions in the profession. Is it not true that the vast majority of new things in medicine find their origin amongst the research-workers, the writers and teachers of medical faculties? Captious criticisms of them, therefore, by other practitioners who have not college connections is undignified and unworthy the profession. Likewise loose criticism by the college groups, of the rank and file of the profession, is uncalled for and prejudicial to the best interests of medicine. The practitioner at the bedside is engaged in a noble calling, no less than the lecturer in an amphitheater or laboratory. Both are necessary; each needs the other. Of what avail is the investigative work of laboratory men and teachers, if not brought to contact with the practitioner for try out? Nor is the great democratic majority of the profession to be excused from the application of strictly scientific methods of clinical observation—work fully as important as that conducted in the hospital ward or laboratory. The epochal investigations of Sir James McKenzie on auricular fibrillation were carried on while a country practitioner. Listen to his own words: "I may be excused if I insist upon the fact that all the essential details associated with this condition (auricular fibrillation), its symptomotology, its relation to heart failure, its response to digitalis, were all discovered by the simple means available to the doctor in general practice. Moreover, and this is the point which I wish to make, the recognition of this condition as a clinical entity and all it implies, could not have been made out by investigators, however capable, if they had restricted themselves to laboratory or hospital ward." This much in argument to show the great need of frequent and friendly contact between the so-called scientific and practical groups in medicine. Their co-operation and reaction upon each other are most needful to insure the best conditions of progress. Toward the consummation of this laudable end what agency is so powerful for good, as the general medical association?

This is what may be characterized as the democratization of medicine. The better spirit of the profession has proclaimed from time immemorial absolute freedom of medical thought and unselfish sharing, one with another of all the discoveries and inventions which bear upon medical progress. No influence has contributed more toward the democratization of the finer things in medicine, than the American Medical Association. It has been the scientific and social leaven which is gradually leavening the whole lump. Fortunately from its birth, to the present time there has arisen from its vast popular membership a wise directing and controlling influence. As out of a heterogeneous citizenship has been born a wise nationalism, husbanding the highest ideals of the Republic, so in this great medical democracy has arisen a beneficent and dynamic force, making for the realization of medical ideals for the medical masses.

The very magnitude of this great national

body and kindred organizations limits the papers and discussions to the leaders and teachers in medicine. The vast majority attend to look and listen; not to be heard. They visit the Scientific Exhibit, examine specimens and apparatus, listen to demonstrations, and are content with asking questions. The papers and forensic controversies interest and instruct. To the average man, prone to get into a professional rut, these experiences are valuable, not so much from the facts inculcated as the stimulus given to larger reading and more careful study of cases. Thus year after year the great host of common soldiers in the medical army attend the American Medical Association. They constitute the great silent but sober, thinking majority. They are loyal and content to be led by the captains and generals of medicine.

In this connection it is a question most pertinent to ask, is there not some way in which this silent majority, the people of the medical republic may more frequently express themselves? May not some of them prove heroes if but given a chance? Do the choicest wildflowers bloom by the well-trodden path or in secluded places? Is it not often so of men? Did the obscurity of Nazareth hinder the birth and development of the greatest humanitarian of the ages? The most illustrious commoner and the greatest generals of the American Commonwealth grew from obscurity. Not less true has it been of medical heroes.

It is not then a debatable question as to the advisability of drawing upon this great reserve of medical possibilities—the vast, silent army of general practitioners. The only question is how it may be done to the best advantage. At first thought one is appalled at the magnitude of membership and prone to conclude that nothing can be done. How far from the truth! One needs but to think of the plan of organization of the American Medical Association, and at once a solution dawns upon him. The primary unit of organization is the County Society, where men and problems are thoroughly tried out, and when really found worth while are brought up to the State or National Organization. The preliminary tests are at home; the finals at the State or National meetings, where critics measure lances, and the unworthy perish before the wise and the strong.

The county or local medical society, therefore, constitutes the fundamental unit of medical society organization. It is the universal, post-graduate medical school of the practitioner. He should cherish and support it with an affection as deep as the love which the true citizen has for the public schools. The profession has not fully awakened as yet to the value of the Medical Society. Membership is not merely a duty; but rather a perpetual opportunity and delight. For the great mass of the profession it is infinitely more important than the State or National body. To every conscientious and progressive physician it should be as sacred as the church is to the devout religionist.

The county or local medical society stands in the relationship of parent to all other organizations. It furnishes, so to speak, the home in which all medical children have welcome, and should return again and again to render an accounting of their achievements. Such are the associations of specialists, the college seminars, clinical and hospital associations, pathologic societies, reading clubs, etc., etc. By association in smaller groups of those interested in particular lines, concentrated and intensive effort, often achieves better results. This, however, does not destroy in the least the main point of contention, namely, that any noteworthy work accomplished should be presented finally before the general medical association. In this way is brought about the proper balancing of medical activities. Besides intellectual betterment there arises that community of interest and coordination of effort, which makes for the higher advancement of the profession.

Too often the practitioner takes the view that with graduation his education is finished. What an erroneous conclusion! His entrance upon practice marks merely the beginning of the study of clinical problems. Methods in their management will change; new ideas will come along. How can he best keep pace with progress as related to the best there is in medical practice? He needs, day by day, instruction in the newer things indicative of medical progress. This he will obtain in part from medical reading, but more from the medical society, which becomes the forum where the recent and best is constantly brought to the practitioner's attention.

The conventional program of the average County Medical Society consists of an essay or two, with assigned discussants. Frequently these are largely compilations from recent texts. This is chiefly advantageous for the essayist, causing him to refresh systematically his knowledge of the topic under consideration. To those who listen it has less value but is productive of good. Careful review of the Journal literature with comments will add immensely to the value of the presentation. Not infrequently the greatest benefit comes from full and illuminating discussion. And right here is one of the most neglected fields of usefulness in the medical society. Fortunate indeed is that society which has been able to cultivate an atmosphere for good discussions. Members should be informed in advance about the subjects which are to be presented. Then each should feel it

incumbent upon himself to read up on the topics; and after digesting this material, and consulting his own experience, come to the society with a well organized discussion to present. Such discussions have substance and body. They often set wrong positions right, and may in their ultimate effect produce a deeper impression than the paper in chief.

The report of cases is a plan often adopted. This is capable of great usefulness as it also is of great abuse. The danger is of desultory presentation of incomplete or rambling data. An unusual case with clinical charts, laboratory findings, a brief review of the recent literature, with presentation of a specimen or the exhibition of the patient—make the report valuable for instruction and a credit to the reporter.

The careful demonstration of pathologic specimens, whether post-operative or post mortem, is always instructive. Drawings, photographs, microscopic sections, add greatly to the interest. Where practicable, clinico-pathologic conferences are most illuminating and helpful. The clinician first presents all the clinical data with argument upon which diagnostic conclusions are based. Independently the pathologist reports his findings, corroborating or disproving the diagnosis of the clinician.

The plan originating some years ago in Kentucky, of instituting courses of systematic post graduate study, in the county medical society, has been tried out with varying degrees of success. Elaborateness of attempt has generally been the millstone which has dragged the effort to its death. Theoretically it sounds easy to parcel out a series of preparatory tasks to a considerable number of men in a society, and expect that each should present his topic as a quiz, demonstration or exposition, at the weekly or monthly meeting. But in practice it does not work out satisfactorily. The chief difficulty is that men, however well disposed, are rarely gifted as teachers. Nor is this to be construed as a reflection on their ability. A few will do the assigned tasks well. Others make halting attempts, lapse in attendance, lose interest and finally drop out entirely. And some will fail utterly. Hence, however praiseworthy the idea, experience seems to have proved that it is the part of wisdom, not to undertake too wide a scope of endeavor.

Instead of attempting to cover the whole realm of medicine, let the circumstances of the time or place suggest the line of study and investigation. At one time it may be a prevailing epidemic of typhoid fever. To one is assigned a historical sketch of the disease; to another its bacteriology and serologic diagnosis; to a third its morbid anatomy with presentation of specimens; a fourth considers symptomotology; a fifth, its management; a sixth, complications; a seventh, the local water supply. This would insure not only a very complete review of the literature of typhoid, but promote in a large way public interest in preventing the disease. The study of epidemiology, occupational diseases, problems of hygiene and public health, of work in relation to the cause and cure of cardiovascular disease and tuberculosis, of diet in Bright's disease and diabetes, but give inklings of the great problems which might be taken up systematically by co-operative medical society effort. It is toward the encouragement of just this sort of investigative work that the National Research Council is now directing its energies.

One of the constant functions of the local medical society should be to stimulate reading and study of current medical literature. For example if there is some particular subject in medicine which is attracting wide attention, let this be taken up by the society. Assign to members the duty of preparing reviews of the most recent texts dealing with the question at issue. Let others cull the recent Journal literature, submitting a resume of the articles read. This, of course, presupposes the availability of files of medical journals. Where a medical library is not available, it should be the duty of the medical association to equip itself in a co-operative way. This, of course, will be best accomplished if a room in common, with telephone and attendant is maintained, where journals and medical books of unusual nature are kept. In this manner the scientific morale of the society is greatly enhanced and good-fellowship encouraged.

Finally nothing is more important at the present time in the evolution of the medical society, than the encouragement of friendly co-operation among physicians. The era of professional selfishness is passing. A rising professional sun is shedding the light of wisdom in dark places. Its warmth is dispelling the gloom of suspicion and bringing forth the choicest flowers of friendship. Its rays are penetrating the soil in which the tree of medical knowledge is planted, making it to spring forth and bear good fruit abundantly.

(*To be continued*)

THE SUTURE OF PERIPHERAL NERVES*

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The suture of nerves is not a new thing. It has been brought to the fore both clinically and experimentally by the late war. The report by

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Adson, however, of forty-eight cases operated upon at the Mayo clinic, having an average duration of twelve months between date of injury and surgical repair, shows that it is a problem to be met in civil life as well as in war. Many cases, I venture, partially disabled from a neglected nerve injury, might be found in our civil practice. I know of two cases of long standing in the rural environs of my own city.

The purpose of this paper is to briefly lay before you the accepted facts and some of the observations made in twelve personal cases.

When there is a complete severance of a nerve Wallerian degeneration begins in the distal segment and also in the proximal segment up to the first node of Ranvier about the third day following injury and is complete about the twelfth day. There is a grandular disintergration of the axon, and the myelin sheath is replaced by droplets of fat.

Without the process of degeneration, regeneration would not be possible. New protoplasmic processes take form from the ruins of the old. The nuclei of the sheath of Schwann multiply and fill the neurilemma proximal to the last node of Ranvier and in the entire distal segment. Nerves without neurilemma do not regenerate. These protoplasmic bands appear about the sixteenth day (Lewis), throughout the distal segment. These bands bridge over the gap between the severed nerve ends. The neurofibrillae are sent out by the axon and follow the protoplasmic bands. When the gap is too great to be bridged by the protoplasmic bands, the fibrillae are caught in the scar and form the neuroma verum. In ununited nerves the proximal end usually has the largest bulbous end.

Ranson has stated the mechanism of regeneration of nerve fibers as follows:

1. Proliferation of axons in central stump.
2. Penetration of the new axons through scar.
3. Utilization of the protoplasmic bands as pathways for the new axons in the distal segment.

In examining for a possible break in the conductivity of a peripheral nerve the diagnosis and localization of the point of break depends on the muscle or group of muscles affected. Injury of the N. ischiadicus causes a loss of all movement of foot and toes and loss of flexion of knee by biceps, semi-membranosis and semitendonosis. If the injury is below the upper part of the middle third the branches innervating the knee flexors usually escape injury.

Lesions of the N. tibialis result in the loss of (a) plantar flexion of foot by gastronemus, (b) all flexion of toes by flexor digitorum, flexor hallucis and flexor digitorum brevis, (c) supination by tibialis posticus. Those of the N. peroneus produce a loss of all dorsal flexion of foot by tibialis anticus, extensor digitorum, extensor hallucis longus and all pronation. Injury of the N. curalis produces a loss of extension of knee by the quadriceps. If the injury is extremely high it is possible to effect the innervation of the Iliopsoas resulting in the loss of flexion of the thigh to a sitting posture. Injury to the N. musculocutaneous gives a loss of flexion of elbow (biceps and brachialis), some function may persist, however, from fibers of the N. radialis. Lesions of the N. radialis in the axillary space result in (a) the loss of extension of lower arm (triceps), (b) extension of hand and proximal phalanges, (c) abduction and extension of thumb as far as the abductor and extensor pollicus longus are concerned. If the injury is below the elbow the function of the supinator longus may not be impaired.

With the anatomic distribution of the peripheral nerves well in hand it is comparatively easy to determine the nerve involved and the location of the offending pathology, even without the external evidence of trauma. But to decide offhand whether there is a break in the continuity of the nerve fibers or simply an impairment of conductivity is oftentimes hard to determine, even with positive reaction of degeneration. If the injury is of long standing, trophic disturbances may appear but they vary with the nerve involved.

Pain at the site of injury may disappear in a few hours after injury and reappear days later as the fine fibrillae become ensconsced in tightening cicatrical elements. The pain may be referred to the distal points of distribution of the severed nerve. Sensation often returns partially, even while paralysis persists, due to the fine anastomosis of fibers from adjacent nerves.

The earlier nerve injuries come to operation the greater will be the per cent of re-established function. Wilms, with his unquestioned authority, insists that nerve injuries should be operated within the first fourteen days and that if the diagnosis is not clear at this early stage an exploratory incision should be made under local anesthesia and the diagnosis made. The cases which allow even so early an exploratory incision are, however, the exception. Most of the cases of nerve injury are complicated with an open infected wound, or a fracture, or both. Borchardt also advises immediate operation in those cases presenting the characteristic symptom complex of a total absence of all nerve function. Hezel does not operate until three to four months have elapsed after injury.

Many cases where the injury to the nerve

stem is merely a contusion or pressure exerted by traumatised adjacent tissues return to normal without operative interference, while others go on to a secondary scar formation, the severe symptoms of which respond only to operative methods. Two of my cases were of this type. One was a heavy scar enveloping the ulnar and median nerves. The patient complained of severe burning and knawing pain in the hand and fingers which had become gradually worse. He could not sleep and carried his hand in a cotton pad. The other case was a small bone spicule bound to the sciatic nerve high in upper third causing an unbearable pain in the leg and foot. The neuroma involved only the perineurium in these cases and was contracting on the nerve fibers. The scar was dissected away and fat flaps interposed. The pain disappeared immediately and the patient began movement of the injured part the following week.

The above cases showed very slight, if any, microscopic injury to the nerve fibers. The spindle-shaped scar was not a neuroma verum but was composed of epineurium and other connective tissue elements of the nerve stem. There was marked change in circulation of the nerve at the point of pressure or contusion. Injury of the vaso neurotaum and the retarded return of the lymph and blood resulted in the accumulation of elements rich in fibrin with infiltration of the epineurium.

Retrogression takes place in the tissues at the site of injury. The curtailed blood supply and the constriction of the surrounding cecatrical tissue leads to atrophy of the more highly specialized nerve fibers. Chronic infection or trauma with irritating foreign particles or the presence of fibrinous exudates and necrotic tissue are stimulants to the highly developed proliferative power of the connective tissue. In the cases cited the symptoms were the result of the slowly contracting scar upon the nerve fibers. Had from four to six months elapsed before operation, it is reasonable to assume that a complete degeneration of the nerve would have ensued and partial resection and suture, at least, would have become necessary. When there is a complete severence of the nerve, either from the primary injury or from the resection of a neuroma, an attempt must be made to coapt the ends, or if the defect is too great, to introduce some method that will afford support and direct the outgrowing fibrillae to the distal segment.

In all of my cases an end to end union was accomplished. This is true of the great majority of nerve injuries. Great care should be exercised in dissecting the nerve ends from the scar tissue enveloping them. The task is lightened if the incision is ample to reach the nerve stem in its normal portions, both above and below the injury. The perineurium is split and easily lifted from the normal nerve until the injured portion is reached. If normal salt is injected beneath the perineurium it is ballooned out and lifted from the stem. The dissected sheath will disclose that an apparent nerve thickening exists only in the surrounding scar. The incision in the perineurium liberates the traumatic exudate following suture and the pain and symptoms of neuritis are not so frequent. Forceful flexion of the joints with the freeing of the nerve stem both above and below will allow of a clean coaptation of the severed nerve ends without tension in a great majority of cases where the defect is as great as three centimeters. If this does not suffice, spiral incisions of the perineurium may be made or transplantation of the nerve stem.

The upper and lower segments should not be disturbed, however, any more than is absolutely necessary for coaptation. The finest catgut sutures are used. Side stay sutures are used in preference to the enveloping stay suture. The line of suture is covered with muscle, fascia or fat flaps. Hæmorrhage should be carefully stopped. The Esmarck tourniquet should not be used because of the danger of secondary hæmorrhage and truama to the proximal segment.

When the defect is too great for coaptation other methods have been devised to bridge over the gap and give support to the outgrowing fibrillae. Vanlair in 1882 used a decalcified bone tube through which the central stump could regenerate to the peripheral one. The rubber tube (Ehrman), magnesium tube (Payt), formalin hardened Calve's artery (Foramitti) have all been tried with uncertain results. Kaelliher used catgut suture swings to bridge the existing defect and tubulized the swing with prepared Calve's artery. He decided that the tube hindered the nutrition of the enclosed part and that the swing suture alone was an essentially better method. Von Oberndorffer in 1907 reported nine cases of tubulization and suture a'distance with uniformly poor results. Nerve grafts and flaps have not proved a success.

In my series of cases, three were of the musculo-spiral, one of the median, three of the sciatic, one of the tibialis, and three of the peroneus. The three musculo-spiral and one of the sciatic cases were complicated with fracture. These cases were all operated within the first six months of injury. About seventy per cent return of function was obtained at the end of a year except one. This case was a complete severence of the sciatic in the upper third. The bulbous neuroma was resected and close ap-

proximation was secured. This was one of the first cases and probably not enough of the scar was resected. There was not the slightest return of function at the end of ten months, at which time I lost track of the case.

The post operative care in these cases is very important. Splints should be used to keep parts supplied by the injured nerve in a corrected position. The splints should be removed two or three times a day and massage given. Electricity and hot-air should be introduced fairly early.

CONCLUSIONS

Nerve injury is fairly frequent in civil practice and all injuries of the extremities presenting penetrating or perforating wounds, and all fractures should be viewed with the possibility of a complicating injury to the nerve. If the diagnosis is not absolute and infection is not present, an exploratory incision should be made under local anaesthesia.

The earlier the repair, the greater the per cent of returned function.

INCOME TAX

Single persons, though required to file a return if their net income for 1920 was $1,000 or more, are, if they are the heads of families, granted a special exemption under the revenue laws. Such a person is defined by treasury regulations as "a person who actually supports and maintains in one household one or more individuals who are closely connected with him by blood relationship, relationship by marriage or by adoption, and whose right to exercise family control and provide for these dependent individuals is based upon some moral or legal obligation." Such persons are allowed the exemption of $2,000 granted a married person. In addition, they are allowed a credit of $200 for each dependent under 18 years of age or incapable of self-support because mentally or physically defective.

A married person living with husband and wife cannot claim an additional $2,000 exemption as the head of a family. His or her exemption is based upon the marital status, irrespective of the support of others living in the same household. The additional $200 credit for dependents does not apply to the husband or wife of a taxpayer. For example, if a married man supports a father who is incapable of self-support, he is entitled to the $200 credit for such person. If through force of circumstances he supports his wife away from home he is entitled to the $2,000 exemption allowed a married person, but not to a $200 credit for a dependent.

A son who has left home but who sends his mother more than one-half the sum required for her support is entitled to the $200 credit, provided the mother cannot support herself. Otherwise, the amount must be considered as a gift, and, therefore, the credit is not allowed. A son living at home and supporting his father, mother, or other relative may claim the $2,000 exemption allowed the head of a family, but not the $200 credit unless such relative is under 18 years of age or incapable of self-support.

* * *

INCOME TAX IN A NUTSHELL

WHO? Single persons who had net income of $1,000 or more for the year 1920; married couples who had net income of $2,000.

WHEN? March 15, 1921, is the final date for filing returns and making first payments.

WHERE? . Collector of Internal Revenue for district in which the person resides.

HOW? Full directions on Form 1040A and Form 1040; also the law and regulations.

WHAT? Four per cent normal tax on taxable income up to $4,000 in excess of exemption. Eight per cent normal tax on balance of taxable income. Surtax from 1 per cent to 65 per cent on net incomes over $5,000.

* * *

Work has begun on the collection of the income tax for the year 1920. Uncle Sam, through the Bureau of Internal Revenue, is addressing to every person in the United States the question, "What was your net income for 1920?" The answer permits of no guesswork. Every single person whose net income for 1920 was $1,000 or more and every married person whose net income was $2,000 or more is required to file a return under oath with the collector of internal revenue for the district in which he lives on or before March 15, 1921.

The penalty for failure is a fine of not more than $1,000 and an additional assessment of 25 per cent of the amount of tax due. For willful refusal to make a return the penalty is a fine of not more than $10,000 or not exceeding one year's imprisonment, or both, together with the costs of prosecution. A similar penalty is provided for making a false or fraudulent return, together with an additional assessment of 50 per cent of the amount of tax evaded.

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Devoted to the Interests of the Medical Profession of Indiana

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EDITORIALS

CHIROPRACTIC INCOMPETENCY.

No stronger argument can be presented to prove our contention that the chiropractors should not be permitted to treat the sick than the circumstance occurring very recently in the city of Fort Wayne, where the spread of smallpox was traced definitely to the office of two chiropractors who very naturally failed to recognize the disease because never trained to recognize it or any other disease. We are told that the Fort Wayne City Board of Health, with the assistance and approval of the State Board of Health, will prosecute the two chiropractors for being the means of spreading smallpox, as also practicing medicine without a license.

However, the most important phase of this whole question of permitting chiropractors to practice medicine is the danger to the public, as the episode to which we call attention clearly points. It is the height of inconsistency to argue that chiropractors, many of whom have not even an ordinary common school education, none of whom are required to have much preliminary education, and absolutely none of whom have any training which will enable them to recognize disease, can be expected to treat intelligently diseased conditions of the human body. A few weeks, or at most a few months, of chiropractic schooling is not sufficient to make a doctor, and if education in any line of human endeavor is worth anything and deserves our support, then thorough education of those who are licensed to treat diseased conditions of the human body is deserving of serious consideration.

It may be contended that the work of the chiropractor does no harm in some diseased or abnormal conditions, but the safety of the public is seriously jeopardized when these ignorant and illy-trained chiropractors are called upon to recognize and treat numerous serious conditions of which smallpox, diphtheria, scarlet fever, typhoid fever, appendicitis, gallstones, syphilis and many others form but a small part. The very fact that the chiropractors are not taught to recognize various diseased conditions, and could not under any circumstances learn to recognize diseased conditions in the short time that they devote to the study of their peculiar creed, is in itself sufficient to condemn them as unworthy of recognition as practitioners of medicine.

As we have stated before, we have no quarrel with the chiropractors or the followers of any particular pseudo-medical sect as to the manner in which disease shall be treated, but we do say that every person who is given a legal permit to treat the sick and suffering should have a good general education, and supplement that by adequate training in all of the fundamental branches which have to do with an intelligent knowledge of the human body in both health and disease. This knowledge is not secured by a few weeks of indifferent training at a chiropractic school, but must be acquired through a course of study that is none less than that given in our own Indiana University School of Medicine. To give chiropractors recognition is to place the stamp of approval upon ignorance and incompetency, to say nothing of discounting the education, training and experience required of those who are permitted to practice medicine under the present Indiana Medical Practice Act. We do not believe that Indiana legislators wish to be placed on record as defending incompetency and failing to offer adequate protection to the people of Indiana. In reality it is the people who suffer and not the medical profession if chiropractors are given recognition on their present show of training and experience. The spread of smallpox in Fort Wayne is only one example of many that may result in consequence of such folly. In all probability the chiropractors may argue that members of the regular medical profession make mistakes, which of course is true, as no one is infallible, but if regular doctors, who have had two years of academic work at our Indiana University, and then studied medicine in the same University for four years more, can make mistakes occasionally, how infinitely more possible is it for chiropractors to make the most serious and indefensible blunders and mistakes when they are not required to have even a high school education, and many of whom have had but a few weeks of so-called chiropractic teaching and training. If education and experience count for anything at all they count just as much in the practice of medicine as they do in any other vocation of life, and if this is not true then the legislators owe it to themselves and the people of Indiana to frankly state that our Indiana University serves no useful purpose and its doors should be closed.

SALVARSAN FAKES

The inclusion in the programme of the All-America conference on the Great Red Plague, which met in Washington early in December, of a discussion of the use of sundry arsenic "substitutes" for arsphenamine (salvarsan) in the treatment of the plague is highly commended by Surgeon General H. S. Cumming, of the Public Health Service.

"Medical officers of the Service and others concerned," he said, "were especially cautioned last spring against the use of arsenic preparations not belonging to the arsphenamine group and were directed to use only the arsphenamine produced by licensed firms under the rules and tests prescribed by the U. S. Public Health Service.

"Testing of these arsenic preparations is very necessary because of their poisonous nature. If not properly prepared, they may be deadly no matter how carefully they are used or what is almost as bad, may be entirely worthless and may delude those who use them with illusory promises of a cure that cannot result.

"Some of the unlicensed preparations that have been foisted on the market were frauds pure and simple, containing no arsenic or other curative agent at all; but most of these were soon detected and their manufacturers punished. Many of those that are still being made result from efforts to circumvent the rigid tests required by the Public Health Service for the protection of the public and to market substitutes which are sold with unwarranted claims as to their curative value.

"Salvarsan (606) was devised by Ehrlich in 1910 after 605 unsuccessful experiments in trying to find a preparation of arsenic that would kill the germs in the patient's blood without also killing the patient. It was carefully protected by patents, taken out in Germany and elsewhere, that which enabled enormous prices to be charged for it. During the war inability to import it from Germany, where it was chiefly manufactured, caused the United States to seize the patent rights and to authorize manufacture in this country.

"Later, in an effort to standardize the drug and to prevent the sale of worthless substitutes, the name "arsphenamine" was adopted; and licenses for its manufacture were granted by the Treasury Department to all persons who complied with certain conditions that were considered essential for safety and health.

"No one who does not comply with these regulations may call his product "arsphenamine"; but there seems to be no law to prevent the manufacture of substitutes bearing other names and claiming to obtain the same results."

Several firms are now manufacturing arsphenamine and neo-arsphenamine under licenses from the Treasury Department. Every batch of their products is rigidly inspected and tested by the U. S. Public Health Service; and these products alone are used in the various hospitals and clinic of the Service. "We do not consider that any other products have been shown to be sufficiently reliable," says Dr. Cumming. "But the value of arsphenamine is well established."

THE THEORY AND PRACTICE OF MEDICINE

From time to time we hear much about the value of a purely vegetable diet in promoting and prolonging good health, and many scientific reasons are advanced to support the claims put forth. Now we are hearing considerable about an exclusive meat diet which has been, through necessity, followed by some of the inhabitants of the polar regions without evidence of harm. We even are told that salt, considered by most of us such an essential in our diet, is entirely unnecessary, and that our taste for it is largely a cultivated one. In fact one of the Arctic explorers not only went without salt for many months because forced to do so, but actually reached the point where food seasoned with salt became distasteful to him. A few years ago the edict went forth that no one should take much fluid with the meals and that water with the meals was decidedly objectionable because it diluted the digestive fluids and inhibited their action. Now we are advised by some of the leading dietitians that taking fluids with the meals, even as much water as desired, is not harmful, but may be beneficial in helping to break up the food and make it more readily subject to nutritional processes. Pie, the distinctly American tidbit, has been considered for many years a fruitful cause of "dyspepsia", but now investigations and experiments by some well-known dietitians seem to prove that not only is pie, as found upon the better class of American tables, unproductive of harm when consumed by the healthy individual, but really possesses more nourishment than usually accorded it. Thus do our ideas and our pet hobbies change, and even those that presumbaly are backed by scientific logic turn out to be fallacious because they are largely theoretical, and have not been tested in the school of practical experience. All of this reminds us that we have too many medical men who are wrapped up in theory and who give too little attention to the purely practical side of the practice of medicine. What we need in our medical schools is not more laboratory teaching, even though such

teaching is an absolute necessity in furnishing adequate knowledge to the medical student, but we need more practical bedside training in the diagnosis and treatment of disease through a careful analysis of cause and effect as found in the patient himself. It is, therefore, a great step in advance that has led to the limitation of matriculation in our better medical schools, and a division of the classes into small sections so that each and every student shall have individual instruction coupled with an opportunity to work out for himself the intricate problems of diagnosis and treatment upon the patient. A further step in advance is the adoption of a fifth or hospital year as part of the medical training before a diploma is granted. This fifth or hospital year should be made eminently practical, and the student should be given entire responsibility in the management of cases, though constantly under the check of his superiors. Theory is all right when it is proven up by experience, and what we need most in our medical colleges today is not only thorough preparation of students in the fundamentals, and schooling in the theory of our science, but an increased amount of practical training in the application of the theory. We are beginning to realize this desired change in our system of education through the lengthening in the medical courses in our better medical schools, and an increase in the hospital facilities connected with those schools.

EYE DISCOMFORT FROM IMPROPER LIGHTING CONDITIONS

The eye specialist frequently meets with patients who are decidedly uncomfortable at near work in spite of the fact that the general health is good and that appropriate glasses are worn for the correction of any refractive error. Not infrequently the cause of this ocular discomfort can be traced to faulty light conditions under which the patients are working. Many people labor under the delusion that if a little light is good, more is better, and in consequence we find eye work being attempted under powerful artificial illumination, and even admitting that the light is coming from the proper direction its intensity is too great for continued comfort. Furthermore, it is very strange that in so many business houses, professional offices, and industrial plants the illumination is obtained from above or directly in front of the worker, when as a matter of fact every eye specialist and every illuminating engineer knows that such an arrangement is radically wrong and is liable to produce great discomfort for those who work under such conditions. It cannot be emphasized too strongly that light should come from the left and behind in order to avoid the disagreeable glare that is so irritating to any eyes. This is as true in obtaining natural light as it is in obtaining artificial light. Employers of labor ought to take this fact into consideration when furnishing light for their employees, and any physician who may be puzzled as to his inability to relieve eye discomfort may find a solution to his difficulty by investigating the light conditions under which his patient is working, and determining to his satisfaction that the light, whether natural or artificial, is not coming from immediately above or in front of the worker, and is not too intense.

NURSING BY TRADE UNION METHODS

No person can afford to be sick, but the average family is almost bankrupt when forced to pay a trained nurse the present rate of fifty dollars a week and board, to say nothing about the doctor's fee and incidental expenses. And the worst of it all is that many of the trained nurses are not rendering the services that they should render. They are acquiring the attitude of so many of the laborers in trying to get the highest compensation and yet give the least in return for it. Not a few of them lose track of the humanitarian side of their work, and no matter what the circumstances they are refusing to be on duty more than a few hours at a time and they designate their duties, when the hours shall be, and if the case requires much attention they insist that there shall be two nurses on the job. Another nasty trick which some of the so-called best trained nurses are employing is to refuse everything but the easy cases, and, worse still, to refuse to take even those unless in the hospital. We have known of numerous instances where patients desperately ill with an infectious disease were unable to get a single nurse out of a half dozen or more who were idle and waiting for a job. There are some nurses who, like the doctors, go whenever called and with no questions as to the character of the case or whether or not the patient can afford the ordinary conveniences; but it is lamentably true that not a few of the trained nurses have lost sight of the humanitarian side of their work entirely. In this connection perhaps a word of criticism of the hospitals is justified in view of the fact that in so many of them it is getting to be a rare thing to find the floor nursing that prevailed a few years ago. It not infrequently occurs that if a hospital case requires anything more than the most ordinary care, the patient is advised that he ought to have a special nurse. No doubt the hospitals are in a measure excusable on the ground that they are crowded, and that there is a scarcity of nurses in training, but irrespective of that, there is a tendency on the part of not

a small percentage of the nurses, both in and out of hospitals, to give less service than formerly, and it really is deplorable in view of the necessity for good nursing care for those who are sick. As a general proposition people, even those who are sick, do not object so much to what is paid for service if they obtain real service, but it is decidedly unfair to pay for service and not get it. Under no circumstances do we intend to include all trained nurses in this criticism, for we know that there are many who are living up to the highest ideals of the nursing profession, but there are so many who are not doing so that we feel that the nurses as a class should purge their ranks of those who are beginning to disgrace the nursing profession by practices that are no better than those of the worst trades unions.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

To urge payment of medical society dues should be a superfluous effort, and yet we know that there are some doctors who are inexcusably negligent, so while the matter is brought to your attention make it a point to escape being numbered among the delinquents on February 1.

THE copies of the revised Constitution and By-Laws have been received from the printer, and one copy is being sent to each of the newly elected county society secretaries. Any other society officer or any member who wishes a copy may secure one by addressing Secretary Combs at Terre Haute.

DOCTORS, like everyone else, are being bombarded with circulars offering wonderful (?) chances of getting rich by investing in various enterprises, and last but not least are the very alluring solicitous letters which convey the news that at last physicians are going to come into their own by being given the special privilege of investing in oil wells and leases owned and controlled by doctors, that give promise of making every one rich. Any doctor who has half brains will steer clear of all such propositions.

WELL, let's hope we really are on the downward path in the cost of everything. It sure has been some year of inflation in prices. Our November issue cost us over three times what our January, 1920, issue did. Financially the *Journal* has been a heavy loser, and unless a break comes soon we are due for an increased subscription price.—*Journal of the Michigan State Medical Society.*

The subscription price to the above named journal is now five dollars per year. Comments similar to the above are appearing in practically all periodicals, lay as well as medical, and publishing houses will give no assurance that there is to be any drop in prices soon.

THERE is no question but that the chiropractic delusion is spreading, and all because of the propaganda that has been persistent and thorough. The public is hearing but one side of the story, and it is time to get the other side from those who know how fallacious, illogical and impracticable is the chiropractic teaching and practice. It remains to be seen whether or not the members of the regular medical profession are going to go to the trouble and expense to do something toward educating the public, or are going to apathetically permit the chiropractors to secure anything they want because no opposition is offered.

WE view with misgivings the various socialistic movements which apply to the various phases of medical practice or public health work. The latest proposition is to place maternity under the influence of a socialistic scheme which has as its purpose the supplying of medical, hospital, and nursing care under state or federal control. It may seem to be a worthy object and yet it is a question whether or not the whole scheme is not one intended to aid various organizations which hope to profit at the expense of the taxpayers, and perhaps the scheme also is sponsored by various health insurance companies that certainly would profit by that kind of legislation.

SOME of the business houses of Fort Wayne are losing their janitors and ought to be peeved at the Ross Chiropractic College be-

cause good janitors are being turned into chiropractors in a few weeks' time, and not infrequently the chiropractic education and training, meagre as it is, is acquired while the janitor is still shoveling coal. The only question with the chiropractic college is whether or not the applicant has the money to pay for the college (?) course. The student, no matter how ignorant he may be, can obtain the diploma in a few weeks if he so wishes, and then the luckless and confiding sick are at the mercy of such incompetents.

SOME of the chiropractors are trying to make out that the two Fort Wayne chiropractors who were guilty of failure to recognize smallpox and in consequence prevent the spread of the contagion, are not in reality chiropractors. However, the culprits possess just as much general education and are just as well trained in the knowledge required to recognize any disease as hundreds of others who claim allegiance to the same sect. A chiropractor, no matter who or where he comes from, is not educated or trained to diagnose and treat diseases intelligently, and the Fort Wayne smallpox episode is only one of many similar circumstances that could be charged up to their ignorance and lack of training.

THIS notice will be read in the latter part of January by five or six hundred members of this Association who have not complied with the request to pay their dues for 1921 in advance. If you have procrastinated until this date, you still have a few more days until the first of February in which to remit to the county secretary and be in good standing. Your status changes February first if you have not paid, and as soon after that as the notices can be prepared, you will receive a letter from the State Secretary declaring you delinquent by reason of non-payment of dues. There need be no surprise at receiving this letter, as your local secretary has given you the chance before this to pay your dues.

THE Senate of New York University has announced the decision of the electors concerning selections for the Hall of Fame. The name of Dr. William T. G. Morton, a dentist, was acted upon favorably. Dr. Morton's fame rests upon his discovery of general anesthesia, for he was the first to demonstrate and proclaim the advantages of the use of sulphuric ether in producing anesthesia. Opinions may differ as to what constitutes fame and who is most entitled to the honor that is conferred by selection to the Hall of Fame, though there can be not the slightest question of doubt concerning the fairness and good judgment used in the selections that have been made by a majority of the distinguished representative Americans who act as electors. While there were those who urged the selection of Ephraim McDowell, James Marion Sims, Benjamin Rush, or other medical men of less repute, yet unbiased judgment must give credit to the discoverer of general anesthesia as entitled to fame that surpasses almost anything that has been accomplished by a single member of the medical profession. The action of the electors should be approved generally.

EVERY member of the Indiana State Medical Association should keep in close touch with his representatives at the Indiana legislature now in session to the end that no legislator will be without comprehensive information concerning not only the advisability but the necessity of maintaining or even improving our present medical standards. Every one who desires to treat the sick in Indiana should comply with the same requirements. There should be no short cuts for anyone. We should permit the licensed practitioner of whatever school or creed to treat patients as he thinks best, whether he wants to dope them, rub them, cut them, or pray for them, but each and every one should comply with the same requirements. We are willing to bet ten dollars against a punched nickel that if each person licensed to practice medicine in Indiana is required to have such a general and special education as is required of the graduates of our own Indiana University School of Medicine, he not only will treat the sick rationally and intelligently but the public will be protected as it is not protected now with hordes of incompetents practicing without let or hindrance and clamoring for a legal recognition to which they are not entitled.

THERE has been a disposition in some quarters to cry out against "the slaughter of the tonsils". At present there is ample justification for the condemnation of "the slaughter of the thyroids". It really is shocking to note how frequently young girls at or slightly beyond the age of puberty are being subjected to thyroid operations without the slightest regard as to whether the nervous and psychic disturbances have any connection with the thyroid. In all probability the better trained surgeons, and especially those who have a conscience, and there are a few of such in existence, are not guilty of thyroid surgery without proving up the necessity for it, but there are many pseudo-

surgeons of mediocre ability and meager experience who are ever ready to sacrifice the thyroid either with or outout provocation. While it may be true that now and then some perfectly inoffensive tonsils are removed, no harm is done, and by far the greater proportion of skilfully performed tonsillectomies result in distinct benefit to the patient. The same argument does not hold true in thyroid surgery, for while operations on the thyroid have been attended with decided relief to those in whom the operation is indicated, yet it probably is true, as asserted by some well known clinicians, that removal of the thyroid, especially in young girls, in many instances has resulted in great harm. It is to be hoped that a more careful study of these cases and the possible etiology of them may result in a more rational therapy.

AT the South Bend session of the Indiana State Medical Association Dr. Charles H. McCully, of Logansport, in his presidential address, referred to Christian Science practice in rather uncomplimentary terms, and the Christian Scientists, believing that he is classing their practice as a fraud, have come forward with a letter concerning the matter which they desire published in THE JOURNAL. Inasmuch as we very frequently receive a letter from the Christian Scientists for publication in THE JOURNAL and are unable to aid this peculiar sect in furthering their propaganda, we do not feel called upon to publish this latest contribution unless Dr. McCully cares to answer it. While there may be some room for debate as to just how far one can go in coupling up the Christian Science faith and practice with the word fraud, yet we have no hesitation in saying that we not only think that much of the Christian Science practice can be classed as a fraud, but in the light of our present knowledge it should be considered criminal. No harm may come from Christian Science tomfoolery in connection with slight or imaginary ills, but when it comes to applying such tommyrot for the relief of diphtheria, purulent appendicitis, gallstones, syphilis, or any number of other diseased conditions that are either curable or greatly relieved by medical or surgical treatment, and are seldom if ever relieved by anything else, it is nothing short of idiocy to give Christian Science healing any other consideration than that given to the rankest fake.

THE legislature is in session. The enemies of rational, scientific medicine are there in force to upset the existing medical standards. The chiropractors want a special licensing board which will permit them to practice medicine without the formality of possessing general educational qualifications or knowing anything about the cause of disease. If our present medical standard is lowered it will be because the regular medical profession fails to educate the legislators concerning the true status of affairs. What every legislator should be told is that it is up to him to protect the public, and the facts concerning the chiropractic teaching should be placed before him in such a way that there will be no misunderstanding. Most legislators are amenable to reason, and if they do not understand how pernicious and damaging the claims of the chiropractors are, it is because it has not been pointed out to them. Any legislator with an ounce of brains can be made to understand the value of education and training for the recognition of the cause of disease and its intelligent treatment. He is not going to be led astray by the specious pleas of the chiropractors that a common school education plus a few weeks of attendance at a so-called chiropractic college is all that is required in order to enable one to diagnose and treat diseases skilfully. An analysis of the whole question is all that is required in order to put the average legislator right, and he must be shown that it is a question of protection to the public and not one of protection for the medical profession. It remains to be seen whether or not the legislators in the present Indiana legislature are presented the facts.

NEVER in the history of world has there been such a demand for charity of the substantial kind as there is at the present time, with millions starving in Europe, to say nothing of the limited amount of suffering and want that exists in our own country. Appeals for aid have been sent to the American people, and numerous benevolent and philanthropic organizations are soliciting donations from our generous people. The greatest difficulty encountered is in determining how and where funds may be contributed so that they will do the most good, as well as reach the people for whom they are intended. While it is not true in all instances yet in many it is known that for every dollar that is contributed a very large portion of the amount goes for salaries and is used up otherwise as a direct result of mis-management. When one can be satisfied that the bulk of the donation really will reach the people for whom it is intended he feels a little more like giving, but it does seem like a criminal waste to give some organizations thousands and hundreds of thousands of dollars when it is known that these same organizations are spending large sums of money in salaries for needless employees, many of whom are in-

efficient as well as extravagant. It would seem the part of wisdom to investigate the conduct of some of these charitable organizations before contributing to them, and it would be a wise provision if these various organizations were united under one head in order to avoid duplications and to effect a little economy in operation. Medical men are interested particularly in helping the destitute members of the medical profession in European countries, and we are happy to say that not one of the several soliciting committees is doing anything else than delivering to the stricken physicians of Europe every penny that is donated by the generous medical profession of the United States. We also are of the opinion that every dollar collected by the Literary Digest for the support of starving children of Europe goes in its entirety to the stricken sufferers. We wish we might say as much for some of the other charitable or benevolent organizations that have been collecting funds for European relief.

DEATHS

CHARLES E. DUNN, M. D., died December 16 at his home in Shelbyville, aged 60 years.

JOHN S. DUKATE, M. D., Alford, died November 11, aged 95 years. He was graduated from the University of Louisville in 1857.

J. DEWITTE GEORGE, M. D., Indianapolis, died December 1, aged 66, death being due to heart disease. He was graduated from the Homeopathic Hospital College, Cleveland, 1880.

C. C. MORRIS, M. D., died recently at his home in Rockville, aged 72 years. He was graduated from the Jefferson Medical College in Philadelphia in 1876. Death was due to heart disease.

HARRY H. SMITH, M. D., Middletown, Ohio, died recently, aged 48 years. He was graduated from the Indiana Medical College, Indianapolis, 1907, and was at one time physician at the Indiana Reformatory.

W. B. MORRIS, M. D., Chalmers, died at his home December 16, following an attack of uremic poisoning. He was 48 years of age and was graduated from the University of Louisville, Medical Department, in 1898.

GRANVILLE REYNARD, M. D., died at his home in Union City November 26 following a stroke of apoplexy. He was graduated from the Medical College of Ohio, Cincinnati, in 1881 and was a member of the Randolph County Medical Society, the Indiana State Medical Association, and the American Medical Association.

GUSTAV G. BRUDI, M. D., New Haven, died December 6 at the Lutheran Hospital, Fort Wayne, aged 56 years. He had been a practicing physician in New Haven for the past thirty-five years. He was graduated from the Toledo Medical College, Toledo, in 1886 and was a member of the Allen County Medical Society, the Indiana State Medical Association, and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. ROYAL BANDELIER, formerly a resident of New Haven, has returned to that city and opened an office for the practice of medicine.

DR. J. C. COWAN, formerly of Dixon, Ohio, has removed to New Haven for the practice of medicine.

DR. M. F. PARRISH, Bluffton, has removed to Monroe for the continuation of his practice in medicine.

DR. D. M. REYNOLDS, Indianapolis, has become associated with Dr. F. A. King, of Garrett, in the practice of medicine and surgery.

DR. W. A. HOLLIS has been named commander of the Hartford City post of the American Legion for the coming year.

DR. CHARLES B. COMPTON, formerly of Michigantown, has recently become associated with Dr. W. L. Hammersley, Frankfort.

WAYNE County is the recipient of an additional gift of $50,000 to assist in the establishment of hospital features for the county's new tuberculosis sanatorium.

DR. JOHN STORK and wife, formerly of Stendal, have removed to Huntingburg, where Dr. Stork will conduct a drug store, having retired from the practice of medicine.

MEMBERS of the official boards of Methodist Episcopal churches in Terre Haute voted unanimously on November 30 in favor of the erection of a Methodist hospital in that city.

DR. ROBERT S. WOOD has purchased the office equipment of Dr. George W. Willeford, Washington, who is retiring from the practice of medicine and moving to Indianapolis.

DR. BEN F. PENCE, Columbia City, has been appointed government public health examiner for Whitley County to succeed Dr. D. S. Linvill.

DR. AND MRS. S. C. MURPHY, Warsaw, left December 16 for Rochester, Minn., where Dr. Murphy will undergo an examination at the Mayo Brothers' Sanitarium.

DR. CHARLES D. HUMES, Indianapolis, announces the removal of his offices from Suite 707 Hume-Mansur Building to Suite 408 Hume-Mansur Building.

THE report from the Lutheran Hospital, Fort Wayne, for the past six months, shows that the hospital earnings exceeded the expenditures, and that in that time 1,325 patients had been cared for and 916 operations performed.

AT the meeting of the Clinton County Medical Society held December 2, Dr. A. G. Chittick was elected president, Dr. W. C. Mount, Kirklin, vice-president and Dr. L. L. Harding secretary-treasurer.

NEW officers for the Jay County Medical Society were elected December 9 as follows: President, Dr. H. W. Markley, of Redkey; vice-president, Dr. Ara Badders; treasurer, Dr. C. A. Paddock.

THE annual meeting of the Randolph County Medical Society was held December 13 and officers as follows were elected for 1921: President, Dr. R. W. Reid; vice-president, Dr. Wallace; secretary-treasurer, Dr. Robison.

AT the recent session of the Board of Trustees held in Chicago, Dr. Rudolph Matas, New Orleans, was elected vice-president of the American Medical Association, succeeding Dr. Isadore Dyer, recently deceased.

ACCORDING to press dispatches from Vienna, dated November 26, deaths are exceeding births in Austria by 100 per cent and the mortality rate is without parallel in history. The deaths are due in the main to malnutrition.

FIFTY members of the Fort Wayne Medical Society attended the banquet at the Baltes Hotel December 14. The banquet is an annual get-together affair and no formal program was carried out.

THE Henry County Medical Society held its annual banquet and election of officers December 14. The officers for the new year are: Dr. L. C. Marshall, Mt. Summit, president; Dr. C. C. Bitler, vice-president (re-elected); and Dr. C. E. Canady, secretary-treasurer.

THE Knox County Medical Society held its regular meeting December 14 and elected the following officers for the coming year: Dr. John Scudder, Edwardsport, president; Dr. C. S. Bryan, vice-president; Dr. D. H. Richards, secretary-treasurer; Dr. H. W. Held, censor.

DR. JOHN AUER, pharmacologist of the Rockefeller Institute of New York, has been secured to institute and conduct a department of Pharmacology in the College of Medicine of St. Louis University, according to an announcement by the president of that institution.

JOHNS HOPKINS HOSPITAL, Baltimore, is to be reconstructed on the most approved plan at an estimated cost of between $11,000,000 and $12,000,000. A new pathological building will be erected at a cost of $600,000 and many additions and improvements made.

DR. CLAYTON C. CAMPBELL, formerly of Indianapolis, has recently accepted a commission as major in the U. S. P. H. S. and is now located at U. S. P. H. S. Hospital No. 56, Ft. McHenry, Baltimore, Md., where he is chief clinician and chief of the medical section.

THE thirty-fifth annual meeting of the St. Joseph County Medical Society was held in Mishawaka on November 17. A fine, scientific program was enjoyed, Dr. Cline, of Chicago, being the principal speaker, and dinner was served at seven o'clock.

SEVERAL arrests have been made in Union City as a result of an order by the board of health that all the pupils in the schools be vaccinated for smallpox, inasmuch as some of the pupils were not vaccinated and returned to school without taking that precaution.

MORE cases of smallpox were present in the city of Goshen during the last week of November than have ever been known before in that city at one time. However, due to the efforts of the board of health and the co-operation of the people, the epidemic was soon brought under control.

AT the annual meeting of the Bartholomew County Medical Society held December 16 the following officers were elected for the coming year: Dr. F. D. Norton, Columbus, president; Dr. C. M. Jackson, Elizabethtown, vice-president; Dr. Lyman Overshiner, secretary-treasurer.

THE regular meeting of the Fort Wayne Medical Society was held December 7 and officers were elected for the new year as follows: Dr. E. M. VanBuskirk, president; Dr. Charles R. Dancer, vice-president; Drs. Miles F. Porter, Jr., and E. E. Morgan were re-elected secretary and treasurer, respectively.

THE new officers for the Fountain-Warren Medical Society are as follows: Dr. A. M. Sullivan, Attica, president; Dr. C. B. McCord, Veedersburg, vice-president; Dr. J. W. Aldrick, Covington, secretary-treasurer; S. S. Delancy, Williamsport, censor; Dr. J. Roy Burlington, delegate to state convention.

THE Wells County Medical Society met December 8 and elected officers as follows: President, Dr. C. H. Mead; first vice-president, Dr. B. W. Harris; second vice-president, Dr. F. A. Metts; secretary-treasurer, Dr. H. D. Brickley; censor, Dr. J. L. McBride, Zanesville; Dr. A. W. Brown, delegate to the state convention.

AT the annual meeting of the Indiana Society for Mental Hygiene, held in Indianapolis December 17, the following officers were re-elected: President, William Lowe Bryan, Bloomington; vice-president, T. F. Fitzgibbon, Muncie; treasurer, Evans Woollen, Indianapolis; secretary, Paul L. Kirby, Indianapolis.

A FINE of one hundred dollars and costs was recently imposed on the Wright Medicine Company, a corporation doing business at Peru, for shipping misbranded articles from the state of Indiana into the state of Missouri. The article was fraudulently represented as being a rheumatic remedy.

A FINE of one hundred dollars and costs was recently imposed on the Dermacilia Manufacturing Company, a corporation doing business at Hammond, for shipping a quantity of articles labeled "Dermacilia Eye Remedy" and "Dermacilia Ointment," which were misbranded.

AT a meeting of the Wabash County Medical Society held in North Manchester at the Young Hotel December 16 the following officers for the coming year were elected: Dr. L. O. Sholty, president; Dr. N. A. Hale, vice-president; Dr. C. J. Cripe, North Manchester, secretary-treasurer.

DR. LUDVIG HEKTOEN, of Chicago, had conferred upon him the honorary degree of Doctor of Laws at the centennial celebration of the Medical College of the University of Cincinnati. The honorary degree of Doctor of Science was conferred upon Dr. Dean Lewis and Dr. Edward O. Jordan at the same time.

THE regular meeting of the Lake County Medical Society was held in Hammond on December 9, and the following officers were elected for 1921: H. J. White, Hammond, president; L. K. Ostrowski, Indiana Harbor, vice-president; E. E. Evans, Hammond, re-elected secretary-treasurer.

DR. WILLIAM MAC LAKE, former chief of the neuro-psychiatric division of the medical department of the air service at Mitchell Field, Long Island, has taken charge of the work of preparing the Marion National Sanatorium for the advent of shell-shocked veterans of the World War, to succeed Dr. Frank R. Hutchins.

IT may be interesting to those who remember the "miracle healer" of New Carlisle, who enjoyed so much notoriety a short time ago, to know he is in jail in Chicago, due to the fact that Illinois laws are not as friendly toward "miracle" men as are the Indiana statutes.

DR. HAVEN EMERSON, former commissioner of health of New York City, has been appointed medical advisor and assistant director of the Bureau of War Risk Insurance. The appointment is in conformity with the policy of the Bureau of War Risk Insurance to select its headquarters' medical staff from the civilian medical profession.

THE regular meeting of the DeKalb County Medical Society was held in Auburn December 9. A fine scientific program was enjoyed and the annual election of officers held. The results of the election are as follows: President, A. V. Hines, Auburn; vice-president, W. W. Swartz, Auburn; secretary-treasurer, M. E. Klingler, Garrett.

THE annual election of officers of the Dearborn-Ohio County Medical Society was held December 1 in Aurora. The new officers are: Dr. Francis M. Mueller, Lawrenceburg, president; Dr. John W. Elfers, Rising Sun, vice-president; Dr. Edward J. Libbert, Aurora, secretary; Dr. Arthur T. Fagaly, Lawrenceburg, treasurer. The next annual meeting will be held in Lawrenceburg.

AT the annual meeting of the Ohio Valley Medical Association held in Evansville Dr. Charles T. Souther, Cincinnati, was elected president; Dr. L. W. Bremerman, Chicago, first vice-president; Dr. Sidney J. Eithel, Evansville, second vice-president; Dr. L. L. Solomon, Louisville, third vice-president; Dr. Benjamin L. W. Floyd, Evansville, secretary-treasurer.

THE first number of the new International Public Health Journal has just been issued by the Department of Medical Information, General Medical Department of the League of Red Cross Societies at Geneva, Switzerland. The journal will be devoted to all phases of public health work and preventive medicine, and will be published every two months in four languages French, English, Italian, and Spanish.

DR. CHARLES INFROIT died recently at his home in Paris as a result of the effects of x-ray burns received in 1898 when one of his hands became infected and an operation was performed. Dr. Infroit was a celebrated surgeon, and his announcement in 1915 in the Academy of Medicine of Paris that he had extracted a bullet from the heart of a soldier was read with interest throughout the world.

THE fifth annual meeting of the Indiana Society for Mental Hygiene was held at the Claypool Hotel, Indianapolis, December 17. The subjects for the morning, afternoon, and evening were "Mental Hygiene as a School Problem", "Mental Hygiene from the Medical Viewpoint", and "Mental Hygiene and the Court", respectively. Many interesting speakers from all parts of the state were present, and the program was a very interesting one.

A REPORT from the medical department of Johns Hopkins University states that beginning in September, 1921, at least two years of college work in chemistry will be required for entrance. This chemical work must be spent part in organic and part in inorganic chemistry. This is the minimum requirement and three full years of chemistry are advised, and in 1923 three full years will be required.

THE Huntington County Medical Society held its regular monthly meeting December 2, at which time the following officers were elected for the ensuing year: Dr. W. F. Smith, president; Dr. Lucien Smith, Warren, secretary-treasurer; Dr. R. G. Hoover, of Bippus, Dr. R. F. Frost, and Dr. M. C. Clokey, censors, and Dr. G. G. Wimmer, of Mt. Etna, delegate to the state convention, and Dr. C. H. Good, alternate to the state convention.

The United States Civil Service Commission announces open competitive examination for the positions of roentgenologist, associate roentgenologist, assistant roentgenologist, and junior roentgenologist. The salaries are $200 to $250 a month, $130 to $180 a month, $90 to $130 a month, and $70 to $90 a month, respectively. Applicants should apply at once for Form 1312 to the Civil Service Commission, Washington, D. C., stating the title of the examination desired.

PHYSICIANS and surgeons of Spain are greatly perturbed over the recent invasion of their country by foreign practitioners, more especially Austrians, who have been unable to find sufficient means for subsistence in their own country, according to press dispatches from Madrid. In consequence they have appealed to the government to make regulations under which foreign practitioners would have to acquire a medical degree in Spain before being allowed to practice.

SINCE December 11 physicians in Missouri have been required to report all cases of diseases designated by the state board of health which are as follows: Anthrax, chickenpox, chancroid, diphtheria, glanders, gonorrhea, influenza, leprosy, measles, meningitis (epidemic cerebrospinal), mumps, ophthalmia neonatorum, plague, poliomyelitis (acute anterior), rabies, scarlet fever, smallpox, sore throat (epidemic or septic), syphilis, tetanus, trachoma, tuberculosis, typhoid fever, typhus fever, whooping cough.

DR. ARVINE E. MOZINGO, Indianapolis, has recently returned from a five weeks' trip through the west, where he read a paper and showed two reels of motion pictures demonstrating his method for the treatment of empyema before the Western Surgical Association in Los Angeles, the county medical societies in Denver, Salt Lake City, Ogden, Reno, San Francisco, Long Beach, Phœnix, Tucson, Kansas City, the Illinois Section of the Clinical Congress of the American College of Surgeons at Peoria, and the St. Louis Medical Society.

THE annual meeting of the Daviess County Medical Society was held Thursday evening, December 2, at Washington, and took the form of a farewell to Dr. G. W. Willeford, dean of the Washington physicians, who is retiring after fifty-two years in the practice of medicine. Dr. Willeford is removing to Indianapolis. Also the election of officers was held, with new officers as follows: Dr. Will O. McKittrick, of Plainville, president; Dr. C. P. Scudder, Washington, vice-president; Dr. A. I. Donaldson, Washington, secretary-treasurer; Dr. O. E. Lett, Montgomery, censor.

THE Rockefeller Foundation announces a cooperative program to assist Medical Schools in Central Europe, which covers the following points: 1. Aid in the rehabilitation of scientific equipment for medical teaching and research. 2. Aid in furnishing medical journals to universities throughout Europe. 3. An invitation to the authorities of Belgrade University Medical School to study medical education in America and England as guests of the Foundation. Colonel F. F. Russell, who has been in Prague since August serving as technical adviser in public health laboratory organization to the Czech Ministry of Hygiene, will arrange the details of the Foundation's cooperation with the medical schools.

DURING December the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies: Calco Chemical Co., Salicaine; Coleman Laboratories, Bacillus Bulgaricus; E. R. Squibb & Sons, Procaine, H. T. Procaine, Solution Tablets Procaine; Winthrop Chemical Co., Adalin Tablets 5 grains, Veronal Tablets 5 grains, Novaspirin Tablets 5 grains; Lederle Antitoxin Laboratories, Typhoid Glycerol-Vaccine, Typhoid Combined Glycerol-Vaccine, Pertussis Glycerol-Vaccine, Pneumococcus Glycerol-Vaccine; The Beebe Laboratories, Pneumococcus Vaccine No. 14, Typhoid-Paratyphoid Vaccine No. 39, Colon Vaccine (Acne) No. 11, Acne (Mixed) Vaccine No. 10; Nonproprietary Articles, Phenetsal, Saligenin.

CORRESPONDENCE

A CORRECTION

Indianapolis, Ind., December 28, 1920.

Editor THE JOURNAL:

I am writing to correct a mistake which I noted in the minutes of the Indianapolis Society as printed in THE JOURNAL of December 15th. The minutes of the meeting of October 26th have in them a resolution attributed to Dr. Wishard and at the time the minutes were sent to you, I thought that was correct. However, at the next meeting a correction to the minutes showed that this motion was by Dr. James H. Taylor.

I do not know what you can do in adjusting this matter, but I feel sure that if at all possible, the above mentioned motion ought to be accredited to Dr. Taylor instead of Dr. Wishard. It was simply an oversight on my part in not notifying you of this error earlier.

Trusting that this mistake may be remedied in some fashion, I am

Very sincerely yours,

LESLIE H. MAXWELL, Secretary.

REPORT ON AFTER-CARE OF INFANTILE PARALYSIS CASES

To the Editor:

The New York Committee on After-Care of Infantile Paralysis Cases published and distributed the report of "The Survey of Cripples in New York City."

Our aim has been to send this report to those in a position of responsibility in agencies for cripples and to all those who might have a general interest in cripples, and in plans for their aid. The undersigned would be glad to know of anyone who has been overlooked and would appreciate suggestions for further possible distribution of the report.

ROBERT STUART, Director N. Y. Committee on After-Care of Infantile Paralysis Cases, 69 Schermerhorn Street, Brooklyn, N. Y.

SOCIETY PROCEEDINGS

FLOYD COUNTY

The annual meeting of the Floyd County Medical Society was held December 10 at New Albany and the following officers elected for the ensuing year: President, William C. Winstandley; vice-president, John Hazelwood; secretary-treasurer, P. H. Schoen; censors, R. W. Harris, J. W. Baxter, and W. L. Starr, all of New Albany.

Regular meetings of this society are to be held the second Friday of each month instead of first Friday as heretofore.

P. H. SCHOEN, Secretary.

KNOX COUNTY

The two hundred and seventeenth regular and the forty-fifth annual meeting of the Knox County Medical Society was held in the Grand Hotel, Vincennes, December 14. Following the annual banquet, Dr. C. W. Hanford of Chicago, guest of the Society, gave an address on Radium Treatment.

Officers for the year were elected as follows: President, John A. Scudder, Edwardsport; vice-president, Chas. S. Bryan, Vincennes; secretary-treasurer (re-elected), D. H. Richards, Vincennes.

Guests from Sullivan, Washington, and Odon, Indiana, and Lawrenceburg, Illinois, were present at the banquet.

D. H. RICHARDS, Secretary.

JOHNSON COUNTY

The Johnson County Medical Society met at the office of Dr. D. R. Saunders, Franklin, and elected the following officers for the coming year: President, L. K. Phipps, Franklin; vice-president, J. N. Record, Franklin; secretary-treasurer, Luke P. V. Williams, Whiteland.

Plans were completed for holding the annual New Year's banquet at the Franklin Hotel, the wives and families of the members to be guests.

LUKE P. V. WILLIAMS, Secretary

CLINTON COUNTY

The Clinton County Medical Society met in regular session December 2 at Frankfort. The annual report shows eleven meetings held during the year with an average attendance of fourteen; twenty scientific papers presented; seven case reports.

The election of officers for 1921 was held at this meeting, with results as follows: President, A. G. Chittick, Frankfort; secretary, L. L. Harding, Frankfort.

(Signed) A. G. CHITTICK.

INDIANAPOLIS MEDICAL SOCIETY

November 9th

Meeting was called to order by Dr. R. E. Repass, second vice-president. The minutes of the previous meeting were read and approved as corrected. The applications of Drs. J. E. Holman, Robert E. Conway, George S. Reitter, W. D. Little, B. A. Thompson, Jacob Paskind and H. L. Magennis were read for the second time and referred to the Council.

PROGRAM:—*Presentation of Cases.*

Case—Ascites—Dr. John W. Sluss—Patient entered hospital three weeks ago with ascites, greatly enlarged liver, marked enlargement of superficial veins, some edema of legs. Gave history of two attacks of severe abdominal pain for which morphine was given. Fluid removed three times. Urine normal, blood normal, Wassermann negative, ascitic fluid showed many lymphocytes and some red blood corpuscles. Blood pressure normal. X-Ray showed retention of food after six hours. Naturally think of tuberculosis. No tuberculosis was found anywhere else in the body and the temperature was normal. If tuberculosis it would be the ascitic form. Malignancy would also be considered. The roll of omentum might be of malignant origin, but the ascitic fluid findings do not warrant this diagnosis. Hydatid cyst also to be considered. An exploratory laparotomy will be made tomorrow to determine the cause. Dr. Ottinger mentioned the fact that he had seen this patient last July and at that time many of the glands were swollen. A piece of gland removed and sectioned was found to be carcinomatous.

Case—Speech Disturbances—Dr. C. F. Neu—Past history negative. Discharged from Army on account of bad teeth and underweight and toxic goitre. Nine teeth removed. Employer noticed loss of memory and also undue levity. Speech disturbance. Spinal fluid: Increased pressure—Cell count 90—Positive globulin—Wassermann four plus. Gold curve typical. Attempt to pronounce certain words and expressions showed the well known paretic speech.

Case No. 2—Past history negative—convulsion October 1st, 1920. Sick two weeks. Previously with chills—numbness in fingers. Two hours later rational, but a very severe headache remained. Latter still persists. Mumbling speech. Nystagmus before entrance to hospital. Difficulty in finding desired words. Spinal fluid and blood Wassermann negative. Two spinal punctures. Smears with carbolfuchsin staining negative. Widal negative. No stipple cells. White blood count increased. Probably either syphilis or a lead endarteritis.

Case Amebic Dysentery—Dr. F. B. Wynn—History of frequent bowel movements with severe pain just previous to same. Incontinence on entrance. Stools had bad odor, light in color. Patient had had various treatments, but salvarsan only drug which gave relief, and this for three months. Blood Wassermann negative and stools showed undigested food particles, red blood cells and much mucus, negative for tuberculosis. In second examination the ameba histolytica was found in abundance. White cells 14,000. Reds normal. Treatment consisted of emetine hypodermically grams 1 daily for ten loses. Quinine colon irrigations 1—1000 and one intravenous injection of 0.6 neosalvarsan. At present patient much improved. One or two stools daily. This condition is rare in this vicinity, but more frequent than we think. Have seen at least twelve cases in this city. It is a tropical disease. Following Spanish-American War there were a number of cases. We are derelict in the examination of stools, probably on account of our fastidiousness. Sometimes one treatment and sometimes another helps the condition. The difference between bacillary and amebic dysentery is that the former is epidemic and more severe whereas the latter infections usually take place through carriers contaminating food or the dishes. This infection is not as frequently water borne as was formerly believed.

Case—Idiopathic Peritonitis—Dr. Wm. E. Gabe—Family and past personal history negative. At age of eleven had tonsils and adenoids removed. Present illness began with very severe pain in left side of abdomen. Pain radiated over abdomen. Taken to hospital and immediately operated. Free pus was found in abdomen—appendix was normal. Intestines

somewhat injected. Pelvis normal. Gall bladder easily emptied. No focus could be found. Drain inserted and abdomen closed with uneventful recovery. There was no apparent cause for this infection. An erysipelas or tonsillitis is usually basic in such conditions. Infection generally hematogenous.

Meeting adjourned; attendance 157.

L. H. MAXWELL, Secretary-Treasurer.

November 16th.

The meeting was called to order by the president, Dr. Jas. H. Taylor. The minutes of the previous meeting were read and approved.

The applications of Drs. M. F. Steele and John A. White were read for the second time. Drs. Clifford E. Cox, H. L. Magennis, B. A. Thompson, W. D. Little, Robt. E. Conway, and John W. Hofmann were elected to membership in the Society.

PROGRAM:—Paper—"*Chronic Leucorrhea*": DR. CARL HABICH.

Abstract—The conclusions are as follows:

(1) The most frequent cause of chronic leucorrhea is chronic infection of the cervical mucosa and of the cervical glands.

(2) Cure of chronic endocervicitis should be attempted more frequently not only to remove a focus of infection but also a predisposing factor in the cause of cancer.

(3) The cure of true chronic endocervicitis is surgical.

(4) Simple trachelorrhaphy is contra-indicated in chronic endocervicitis and should only be done in those cases in which the infection is limited, generally early in the puerperium.

(5) Plastic amputation of the cervix should not be done in those cases in which future pregnancies are anticipated.

(6) There are certain objections to all of the operations which have been devised for the cure of endocervicitis, the Schroeder method probably insuring the best results.

(7) We must seek further for the ideal surgical procedure which will insure the complete removal of the entire infected areas, the preservation of the cervical musculature and which will not interfere with future pregnancies.

Paper—"*Hypophyseal Insufficiency*": Dr. E. N. KIME.

Abstract—The scope of the present subject for this paper does not pretend to cover the literature exhaustively, but one phase of pituitary dyscrasia is covered—that of underactivity or hypophyseal insufficiency. Anatomy and embryology—both lobes. Pars anterior from stomatodeum. Lobus posticus consists of two parts—the pars nervosa or post lobe proper, and pars intermedius (located between the other two lobes); post lobe developed from the central nervous system, pars hypothalamicus of the cerebrum. Important relations—sella turcica, optic nerves, cavernous sinus, sphenoidal sinus and nose, overlying brain, tuber cinereum, optic tracts, mammillary bodies, third ventricle.

Physiology—as worked out by Cushing and others—Anterior Lobe—concerned with growth—particularly of the genital, dermal and musculo-osseous structures. Posterior Lobe—metabolism, especially carbohydrate metabolism, sugar tolerance. Blood pressure. Urinary secretion (Pars Intermedia). Complete removal of the gland is fatal.

Pathology—Very little known at present—especially in the non-neoplastic varieties. Similar in appearance to parathyroid gland.

Normal Histology—3 Lobes—Anterior consists of blood vessels and epithelial cells. Epithelial cells two varieties, basophile or chief cells, and eosinophilic or chromophilic cells. So far no histologic entity of the nature of the thyroidal mitochondra of Goetsch has been identified. Middle lobe probably part of both anterior and posterior lobes. Epithelial cells, neuroglia cells and fibers. Non-neoplastic histopathology, nothing complete or definite. Neoplastic histopathology.

Because of duality of origin any tumor of glandular or nervous tissue origin is possible. Also connective tissue tumors from the supporting stroma of the anterior lobe of gland. Specific etiologic data along the line of bacteriology or serology is also lacking so far as hypophyseal affections are concerned. Clinical picture has in the past been based upon meager pathological data upon conflicting physiological findings. However, due to the comparative wealth of clinical data, studies, largely empirical, based upon Hippocratic methods have been made. Careful observation and record of clinical signs and symptoms as present before and as modified by specific treatment. Symptoms and signs of hypophyseal insufficiency: (1) Local pressure signs, mainly in neoplasms, (2) Hormonic signs. (A) General, (B) Regional, (3) Polyuria, changes in basal metabolism, carbohydrate tolerance, mentality, etc.

Special examination (1) Urine, (2) Blood pressure, (3) Basal Metabolism, (4) Blood Chemistry, (5) X-Ray, (6) Ophthalmoscopic, (7) Goetsch reaction and cutaneous pituitary.

Treatment—(1) Substitution of whatever substance is lacking, (2) Thyroid, (3) X-Ray or Radium, (4) Surgery in some cases. Twenty cases of hypophyseal insufficiency, 15 primary, 2 secondary to adrenal, 1 gonadal and 1 thyroidal were mentioned.

Discussion—Dr. E. E. Padgett—The subject treated in Dr. Habich's paper is receiving more attention now than ever before. Focal infections may be the source of this trouble sometimes. Surgery not always necessary—personally swabs cervical canal with iodine and fills vagina with fullers' earth. Cervical glands may remain relatively quiet for years except for a discharge. Prophylaxis very important. Lacerated cervices resulting from childbirth apparently heal, but many cases later show remains of lacerations. Surgery of cervix in removal of all glands difficult. However with currette and cautery I feel safe.

DR. E. F. KISER—Dr. Habich gave a masterful presentation of a condition generally considered trivial. One often sees mental abberation in connection with chronic leucorrhea. We know very little of endocrinology and even those men specializing on this subject do not have a great amount of definite information. The most striking fact in Dr. Kime's paper is that almost all the twenty cases he reported were discovered in the regular routine of office practice and presented themselves on account of constipation or some other abdominal complaint of simple origin. I cannot agree with the Doctor that all of the cases reported were strictly hypopituitary ones. The close relationship of all glands of internal secretion makes it impossible to select any one gland as alone responsible. Endocrine dystrophies have an enormous future in medicine.

DR. S. E. EARP—Many women with leucorrhea come to the general practitioner. Generally they have seen many other physicians for this condition. Dr. Reeder of St. Louis says all cases are founded upon a physiological basis—many cases are curetted, but none get well without further treatment. How shall we differentiate between a pathological and physiological leucorrhea? It is not wise to take douches constantly, but many after douching with silvol,

argyrol or iodine followed by an astringent such as the glyceride of tannic acid get well. I should like to know of some good medical treatment for this condition.

DR. F. E. ABBETT—Has treated leucorrhea in almost every possible fashion. Sometimes one thing, sometimes another, helps. Lately has been using a capsule of silvol allowing same to dissolve in cervix. Astringent douches are temporary reliefs—general treatment also may help in getting results. It is very difficult to handle chronic cases without surgery.

DR. WM. H. FOREMAN—There were certain symptoms which made us think we were correct in our diagnosis of these cases. Patients do not come to physicians for endocrine disturbances. It is generally for gastro-intestinal symptoms and these mostly functional. In cases with involvement of the somatic system there is a hypocondition of all glands and patient complains of neuritis, neuralgia, rheumatism, irritability, etc. In the sympathetic system involvement we have the vagatonic type—pains, definite and indefinite in abdomen. This condition is most common in women. We find spastic constipation, hyperchlorhydria, flatulence, hyper motility. Sympathetic system is first attacked by the endocrine chain and therefore we have abdominal pain. Errors of perception, judgment and reasoning power are frequent. The word nervousness ought not to be in our vocabulary.

DR. A. S. JAEGER—Leucorrhea is a symptom, but chronic leucorrhea as a symptom of endocervicitis would be a more correct title for Dr. Habich's paper. I believe endocervicitis is secondary to leucorrhea. The curette does no good except for removal of foreign substances. Chronic leucorrhea often found in connection with general conditions. Often after a hysterectomy the patient returns with a vaginal discharge and cervix has been removed. Many with discharge may be cured by stopping lysol douches.

DR. L. D. CARTER—Has seen a number of pituitary cases. Treatment is unsatisfactory. Milder cases are amenable to treatment. If one gland is underactive all the endocrine glands are. Has used all the glands singly and is now using the pluriglandular formulæ, selecting the one which seems most deficient and using the others in a synergistic manner. Most hypopituitary cases are of the preadolescent type with small skeleton. This sometimes is corrected at puberty.

DR. T. C. KENNEDY—Danger from use of radium in these cases is more from stenosis of cervix than sterility. Many cases show an amenorrhea for three or four months, but then return to normal menses. Pregnancy in two cases following radium treatment noted. Raduim is not by any means a specific in these cases.

DR. HABICH (in closing)—Cervical infections are the main cause of leucorrhea. Medical treatment is an aid. Curettement should be below the internal os for a pure endocervicitis. None of the operations are satisfactory.

DR. KIME (in closing)—The hypopituitary condition was primary in perhaps half of the cases reported. Hypopituitarism is a factor in the conditions mentioned in the paper.

Meeting adjourned; attendance 75.

L. H. MAXWELL, Secretary.

LAKE COUNTY

A regular meeting of the Lake County Medical Society was held at the Lyndora Hotel in Hammond on December 9, 1920, thirty members being present. After an excellent dinner, Dr. L. J. Ostrowski gave an interesting talk of his experience with the Red Cross in Poland. President McMichael delivered a forcible address on Medical Organization particularly as it relates to the Lake County Medical Society. Every member present made a speech, the tenor of all being for the betterment of the Lake County Society.

Applications for membership were received from Roscoe H. Reeve of Whiting, Robert N. Bills of Gary, J. H. Goad of Gary, and Frank R. Doll of Whiting. All of these names were indorsed by the Board of Censors and duly elected to membership.

A letter from Dr. King of the State Board of Health asking the Secretary to recommend to the United States Public Health Service the names of members of the County Society to whom cases of venereal disease might be referred by the Board was read. The Secretary was instructed by unanimous vote to write Dr. King that the Society disapproved of this plan.

On motion, the Chair appointed a Committee consisting of Drs. Nesbit, Oberlin, and L. J. Ostrowski to draw up suitable resolutions on the death of Dr. Hoskins of Whiting.

The Secretary-Treasurer's report showing receipts for the year 1920, of $84.00, expenditures of $38.50 with a balance in the treasury of $80.42 and an average attendance during the year 1920 of 17 was accepted.

The following officers were unanimously elected: Dr. H. J. White of Hammond, President; Dr. L. J. Ostrowski Indiana Harbor, Vice-President; Dr. E. E. Evans of Gary, Secretary and Treasurer. Dr. E. E. Evans and Dr. T. W. Oberlin, delegates to the State Association. Drs. Malmstone and Nichols, alternates. Dr. Ira Miltimore was elected as a member of the Board of Censors for three years, succeeding Dr. Gibbs, whose term expired. Dr. F. H. Fox elected for one year, to succeed Dr. Hoskins, deceased. (Dr. Iddings still has two years to serve.)

It was voted that the first six meetings in 1921 be held in Gary and the last six in Hammond provided that the Society might accept an invitation to meet at any other place at any time, should it seem advisable.

Meeting adjourned.

E. E. EVANS, Secretary.

GRANT COUNTY

The Grant County Medical Society met in regular session November 30, 1920, with the following interesting program:

Dr. E. O. Daniels—"Meningitis."

Dr. J. F. Loomis—"The Irregular Practitioner and His Effect on the Future of Medicine."

At the close of the business meeting the following resolutions were read and adopted:

"WHEREAS: Dr. Harry Miller has been recently transferred from the local branch of the National Military Home to the position of Chief Surgeon of the Danville Branch at Danville, Ill., and

"WHEREAS: This marks the termination of 30 years as executive officer in this branch and the rendition of a service of unsurpassed consideration, kindness, efficiency and faithfulness to his trust, and

"WHEREAS: During these years it has been to us a constant incentive to have associated with his nobility of character and earnestness of purpose as a fellow citizen, friend, gentleman and physician;

"BE IT RESOLVED: That the Grant County Medical Association express to Dr. Miller, in this manner, its regret at his departure and its keen loss of his association, and wish for him God-speed and happiness in his new post and,

"BE IT FURTHER RESOLVED: That this resolution be made a part of the permanent records of this society and that a copy of same be sent to Dr. Harry Miller and a copy to the Board of Managers of the National Military Home, through its President, as an expression of our esteem.

"NETTIE B. POWELL, Secretary.

THE MUNCIE ACADEMY AND DELAWARE-BLACKFORD MEDICAL SOCIETY

OCTOBER 22, 1920.

Meeting of the Muncie Academy was called to order by Dr. Buckles, the president. Minutes of previous meeting read.

Dr. Mix presented a case of cellulitis in a boy ten years of age.

Election of officers for the ensuing year as follows: President, Dr. B. R. Kirklin; Vice-President, Dr. H. Bowles; Secretary and Treasurer, Dr. R. H. Beeson.

Program: Paper, "Post Partum Hemorrhage (Cervical)—Dr. H. D. Fair.

Paper was discussed by several members.

It was moved and seconded that on account of the district meeting the following Friday the regular Academy meeting be postponed until November 12th.

Adjourned.

NOVEMBER 12, 1920.

Meeting of the Muncie Academy of Medicine was called to order by Dr. B. R. Kirklin, president. Minutes of previous meeting read. Dr. O. E. Spurgeon gave further report on a case, supposedly chorea, which he had previously presented before the Academy. A case involving medical ethics was brought up by Dr. H. D. Fair. Two cases of pellagra reported by Dr. F. E. Hill. Dr. J. C. Quick gave health report showing much diphtheria and scarlet fever in the city and county with some deaths from each.

Two applications for membership were presented, the applicants being Drs. L. E. Weary and R. E. DeWees, both of Hartford City.

PROGRAM:—Paper: *"Pernicious Anemia"*:

DR. F. L. GLASCOCK.

Pernicious Anemia: "The subject of this paper, idiopathic or pernicious anemia, presented itself to the writer because of the fact that the incidence of the disease in this particular vicinity seems to be on the increase. After the foregoing statement one might doubt the tact of quoting Cabot "that the incidence of the disease is a good deal a matter of keenness on the part of the practitioners of any district", but I think I may safely do so when I add that many of the cases I have heard of I have never seen and the few that I have under personal observation are very probably but a small percentage of the many that have gone undiagnosed.

Two cases that have been diagnosed pernicious anemia present such striking symptoms, so like those pictured in the literature, that a review of them might perhaps be both interesting and instructive:

Case One:—The patient is a male (in which sex the disease is most common), aged 55 years; has the appearance of being extremely well nourished, weighing some 195 pounds. Presented himself at office some eight months ago and at that time the lemon yellow tint to his skin was the most striking feature. He was having his bad days, but was going daily about his business and his strength seemed little diminished, A few gastro-intestinal symptoms were also showing themselves, some belching and bloating, "a little indigestion" he termed it. Yet at that time the laboratory findings as reported by the Mayo clinic were as follows: Blood—hemaglobin varying from 52 to 59 per cent, red blood cells 2,780,000, leucocytes 5,600, moderate aniscytosis, cells not uniform in size, and slight poikilocystosis, cells irregular in shape. There was absence of hydrochloric acid in the stomach, the Wassermann test was negative. Blood pressure 115-85. A line of treatment was advised and a final injunction added "that if the blood was at any time reduced to an alarming condition transfusion should be resorted to."

Under arsenic by mouth in the shape of Fowler's solution the condition was for several months apparently held fairly stationary. Then to the gastro-intestinal symptoms was added an occasional diarrhoea, whether from the arsenic or from the disease itself is not known. At such times, however, the Fowler's solution was stopped. Then the bloating became more marked, there was occasional vertigo, and a constant tingling, numbness and coldness of the hands and feet. Later came transitory spells of faintness and palpitation none lasting more than several hours. Yet six months from the time of the first blood examination the hemaglobin was 57 per cent, red cells 2,800,000, showing practically no change although the symptoms were much aggravated.

One month later there came on very suddenly a severe attack of faintness and palpitation, breathing was difficult, the attack lasting some 5 to 6 hours. It seemed that the time for a transfusion had come and it was given, 650 c. c. of blood being transfused. A week to 10 days following the procedure no marked improvement was noticeable.. If anything the blood picture was slightly lower and the blood pressure fell some 10 to 15 degrees.

A second case, a woman of 47 years, is interesting because of the fact that a sore tongue and mouth was her principal complaint one year before any anemia was suspected. Periodically small ulcerated areas appeared on the mucosa of the mouth. Gastro-intestinal symptoms were marked, belching, bloating, a persistent form of vomiting and after the use of small amounts of arsenic in Fowler's solution an intractable diarrhoea. She had attacks of weakness and palpitation. At times there was an elevation of temperature not exceeding 101 degrees. An anemic condition of the conjunctiva and finger tips was noted and a blood count was taken. The hemaglobin was 45 per cent, the red cells 2,000,000. Under arsenical treatment rapid improvement in all of her symptoms was noted and the process seems to have been checked temporarily.

The term applied to the disease, idiopathic, betrays our lack of knowledge of the etiological factor producing it. We do know, however, that by it both hemaglobin and red blood corpuscles are reduced, the red cells to a much greater extent than the hemaglobin. The latter remains relatively high, which is not true of other forms of anemias, such as that produced by chlorosis, gastric carcinoma and the various forms of secondary anemia. It is said that in no other form of anemia are the red cells reduced to such an extent, frequently to 20 per cent of the normal. Some destructive agent is very evidently at work, perhaps both hemolizing the red blood cells and attacking the blood-making organs. Most authorities attribute the damage done to some toxin produced within the body. Oral and gastro-intestinal sepsis has its advocates. The increased incidence of the disease in women who have undergone repeated pregnancies would point in such cases to a toxin elaborated in pregnancy. Fright and extreme emotion are said to predispose. Heredity also plays a part, several members of one family being often similarly affected.

Owing to the fact that the gastro-intestinal tract is so persistently and markedly affected by he disease it would seem logical to pay particular attention to it, particularly the mouth, where a causative micro-organism might be harbored. Pyorrhea should be treated, careous teeth extracted, and diseased tonsils removed. Intestinal antiseptics are suggested, but in my opinion little might be expected from them. Occasional purging and daily high rectal enemata are said to have been used with beneficial results.

In the majority there is a gastric achylia. Neither hydrochloric nor ferment glands secrete, there being an atrophy of the gastric mucosa. Hydrochloric acid and pepsin are useful in such cases.

The drug "that cures the curable cases and benefits the others" is arsenic. It may be used in many forms, Fowler's solution by mouth being the most simple. In my experience, which is extremely limited, the administration in this disease of Fowler's solution cannot be long continued even in moderate dosage without symptoms that interdict its further use. The cacodyllate of sodium hyperdermatically or salvarsan in the vein is reported to act in some instances very beneficially without any attendant gastric or intestinal symptoms.

Blood transfusion is generally, I believe, resorted to after medical treatment has failed to produce the desired results. As a rule it is followed by a better blood picture and an amelioration of symptoms, however transitory that may be. Splenectomy is still a later resort. Personally I have seen one such case. By it a cure was not effected, the course of the disease appeared to progress in much the same manner as an unoperated case.

One symptom of pernicious anemia which has been said to be of great value in differential diagnosis is that of retinal hemorrhage. In no other anemia is it found. For that reason an examination of the eye grounds is of prime importance in the making of a diagnosis."

Discussants: Drs. Sellers, Beeson, Trent and Spurgeon.

Committee consisting of Drs. Moore, Ball, Hollis, Beeson and Kirklin were appointed to arrange program for the various meetings.

Adjournment.

NOVEMBER 19, 1920.

Muncie Academy of Medicine met at the New Kirby Hotel. Meeting called to order by Dr. Kirklin, President. Minutes of last meeting read and approved.

Committee on Program submitted the following report: "The Committee on Program wishes to make the following report and move its adoption: That all case reports be abstracted by the doctor reporting the case and given to the secretary for publication in the State Journal. That only one case be reported at a meeting. That when local reports are not possible a brief review of current medical literature or a report from Cabot be substituted. That all discussion of the case report be confined to the case in question.

That the paper of the evening be freely discussed on its scientific merits. That each discussant be limited to five minutes by the chair. That the chair not allow individual discussion between members without formal recognition."

Report was discussed and was adopted with the following amendment: "That the discussant be not limited in time so long as he sticks to the subject."

Drs. L. E. Weary and R. E. DeWees were voted into the Academy.

PROGRAM:—Paper—"*The Thymus*":

DR. GORDON.

The Thymus: "A brief review of the anatomy of the thymus as described in Cunningham's Anatomy.

The thymus, a two-lobed structure, lies in the anterior part of the superior mediastinum extending upwards for a variable distance into the neck and downwards as far as the fourth costal cartilages. It lies behind the sternum, between the lungs and in front of and closely applied to the great vessels, namely, the pulmonary artery, the Innominate and superior Vena Cava veins. Normally it is said to reach its maximum development by the end of the second year after which it remains stationary or degenerates, very little of the glandular structure being left after the age of puberty.

The morbid conditions involving the thymus gland are: (1) status lymphaticus, and (2) enlarged thymus. Enlarged thymus is the most common and important condition connected with the gland. It usually occurs soon after birth, but may occur later in life. Very little is known as to the cause of an enlargement of the thymus.

The symptoms according to the observations of Howard Brayton and Arthur Heublein may be divided into two classes: General and local.

Fussell in Monographic Medicine says, "The symptoms are difficult inspiration and expiration often amounting to an actual stridor. The inspiratory and expiratory acts are both prolonged, the former being more marked. There are signs of obstruction in breathing. There is dullness of greater or less extent under the upper piece of the sternum, often extending beyond the line of the upper piece of the sternum. Cynosis and edema of the lungs occur and intra cranial pressure is manifest. There may be a mere stridor, there may be attacks of acute symptoms due to compression, or there may be sudden death, the severity of symptoms depending on the degree of compression."

Of the symptom cough Brayton says, "The cough is often croupy and paroxysmal, worse during feeding, and out of proportion to the clinical findings in the throat or chest. During the attacks of cough there are often a few moist rales at the base of the lungs.

The one diagnostic means which stands above all others and the only one which is infallible is the X-Ray.

Before making a clinical diagnosis of thymic enlargement, one must think of and rule out various conditions giving rise to dyspnoea in children such as infections involving the larynx, laryngismus stridulus, compression of the trachea by peribronchial glands or new growths, adenoids, congenital malformation of the larynx, foreign body in the air passages, etc.

Case Report:—Male infant seen by myself and referred to Dr. B. R. Kirklin for treatment.

The child, weight ten pounds, about six hours after birth developed a respiration which was decidedly abnormal. The patient became moderately cyanotic and the inspiratory stridor could easily be heard in the adjoining room. The infant had no fever; the rate of its respirations was about seventy a minute; while the pulse rate had dropped to eighty per minute. I was unable to detect any rales in the lungs and if any were present they were obscured by the loud inspiratory and expiratory stridor. There was dullness both to the right and left of the manubrium extending slightly beyond the mammary line on either side as high up as the clavicles and down-

wards merging into the area of cardiac dullness. The thyroid was quite palpable, being moderately enlarged. Digital examination of the larynx and an effort to remove any mucus by that means or by the use of suction with a syringe and catheter yielded no results and afforded no relief from symptoms. The child coughed and sneezed frequently and would nurse for a very short time. The mother said its symptoms were worse when it tried to nurse. The following day its condition seemed a little improved and as this patient had had an infant brother to die of the same condition four years previously at the age of three weeks it was decided to risk a trip to Muncie for X-Ray diagnosis and possible treatment.

The X-Ray revealed a large thymus corresponding to the area of dullness. The patient was given a treatment immediately and returned home. A few hours after treatment the pulse rate rose to 120, the stridor was almost inaudible; the child began to nurse well, but there was a slight fever, amounting to 99.5 or 100, which disappeared within 36 hours. Subsequent exposure to the X-Ray ten days later produced the same rise in temperature following its use which disappeared in about the same length of time. At the present the child is doing very well.

This was a severe case, presenting typical symptoms and very easily diagnosed. However, had it been milder it might easily have been overlooked.

I believe that in the case of every infant who has attacks habitually of dyspnoea, cough and cynosis one should search with the X-Ray for a possible cause in the thymus when other causes are not certain.

DISCUSSION.

CHAS. A. SELLARS—The essayist has covered the subject of hyperplasia of the thymus in infancy and there is not much that I will be able to add. As there is probably a normal hyperplasia in most all new born babies, it behooves us as physicians to be on our guard and to know that involution is occurring normally. This can only be done by the aid of the X-Ray. A point brought out by the essayist that is new to me and which should be looked for in these cases is the progressive slowing of the pulse.

In these infants with persistent thymus we should consider them from two angles: One in which there is the hyperplasia alone and producing its pressure symptoms upon the vital structures within the mediastinum and the other in which we have heretofore called status lymphaticus. This term is usually used to convey the conception of a peculiar condition of lowered constitutional resistance predisposing to sudden death, either spontaneously or as the result of relatively slight cause. A hyperplasia of the thymus is persistent in both of these conditions. However, in status lymphaticus we have the added anatomic stigmata, that of hyperplasia of the lymphatic organs, particularly of the tonsillar ring and lymphoid tissue of the intestines, hypoplasia of the arterial system, rachitis. Patients showing this symptom complex are regarded as especially susceptible to physical and mental shocks, infections and intoxications.

That they are susceptible to treatment in a great majority of cases has been proven first by Friedlander of Cincinnati and Myers of Milwaukee, who both treated a case with X-Ray. Both cases were cured by X-Ray exposures energized by a static machine. I would consider the X-Ray treatment of these cases the most rational and least dangerous. If the gland should be made to atrophy too fast I would see no danger as Park and McClure of Johns Hopkins University have proven by animal experiments no detectable alteration physical or mental. I have had six cases of hyperplasia of the thymus in my limited practice. Four are dead and two are living. My first case was diagnosed by autopsy. It was seven years of age and showed a status lymphaticus. The second was a status lymphaticus and was diagnosed clinically and treated with X-Ray exposures energised with a static machine with no results. The third was diagnosed as laryngeal diphtheria and autopsy revealed a very large thymus. The fourth was diagnosed clinically post mortem. The fifth is a case of status lymphaticus eight years of age and is receiving X-Ray exposures. The sixth is a case of hyperplasia of the thymus in a baby seventy-two hours old and is receiving X-Ray treatment. Both of the later cases have received the confirmatory diagnosis with the Roentgen ray."

Adjournment.

NOVEMBER 26, 1920.

Muncie Academy of Medicine met at New Kirby Hotel for weekly dinner meeting.

Case of pellagra presented by Dr. Hill. Discussed by Drs. Moore and Sperry.

PROGRAM:—Paper: *"Cholecystectomy and Operative Injury to the Bile Ducts."*:

DR. H. K. BONN, Indianapolis.

Abstract: Dr. Bonn described and illustrated by lantern slides the various anomalies of the bile ducts and blood vessels. The modes of injury, during or incident to the removal of the gall-bladder, to the hepatic and common ducts were described and the precautions necessary of observance in order to avoid these injuries were described with considerable detail. The control of hemorrhage, during operations on the biliary tract, was discussed, and the repair, by various methods, of injuries to the hepatic or common ducts was discussed.

Discussant—DR. WILL C. MOORE.

Adjournment.

THE TRUTH ABOUT MEDICINES

Since publication of New and Nonofficial Remedies, 1920, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

NEW AND NONOFFICIAL REMEDIES

MERCURY (MERCURIC) BENZOATE-SEYDEL.—A brand of mercuric benzoate (see New and Nonofficial Remedies, 1920, p. 181) complying with the N. N. R. standards. Seydel Manufacturing Co., Jersey City, N. J. (*Jour. A. M. A.*, Dec. 4, 1920, p. 1569).

CULTURE OF BACILLUS BULGARICUS-COLEMAN.—A pure culture of Bacillus Bulgaricus, marketed in bottles containing about 90 cc. This culture is stated to be suitable for all purposes for which Bacillus bulgaricus is used (see general article on Lactic Acid Producing Organisms and Preparations, New and Nonofficial Remedies, 1920, p. 156). Coleman Laboratories, Wheeling, W. Va. (*Jour. A. M. A.*, Dec. 18, 1920, p. 1717).

PNEUMOCOCCUS GLYCEROL VACCINE (Types I, II, III Polyvalent)-LEDERLE.—A suspension of killed pneumococci of characteristic strains of Types I, II and III (equal proportions) in a vehicle composed of glycerol, 66 per cent.; physiological solution of sodium chloride, 33 per cent., and cresol, 1 per cent. Supplied

in packages of three vials containing the glycerol vaccine and of three vials of sterile diluent with which to make the proper dilution of the vaccine at the time of injection. For a discussion of the actions and uses of pneumococcus vaccine, see New and Nonofficial Remedies, 1920, p. 286. Lederle Antitoxin Laboratories, New York.

PERTUSSIS GLYCEROL VACCINE-LEDERLE.—A suspension of killed pertussis bacteria (Bordet) of eight strains, in a vehicle composed of glycerol, 66 per cent.; physiological solution of sodium chloride, 33 per cent., and cresol, 1 per cent. The product is supplied in packages of five vials containing the glycerol vaccine, and five vials of sterile diluent with which to make the proper dilution of the vaccine at the time of injection. For a discussion of the actions and uses of pertussis bacillus vaccine, see New and Nonofficial Remedies 1920, p 235. Lederle Antitoxin Laboratories, New York.

TYPHOID GLYCEROL VACCINE (Prophylactic)-LEDERLE.—A suspension of killed typhoid bacteria (Rawling's strain) in a vehicle composed of glycerol, 66 per cent.; physiological solution of sodium chloride, 33 per cent., and cresol, 1 per cent. The product is supplied in packages of three vials containing the vaccine, and three vials of diluent with which to make the proper dilution of the vaccine at the time of injection. For a discussion of the actions and uses of typhoid vaccines, see New and Nonofficial Remedies 1920, p. 291. Lederle Antitoxin Laboratories, New York.

TYPHOID COMBINED GLYCEROL VACCINE (Prophylactic)-LEDERLE.—A suspension of killed typhoid bacteria (Rawling's strain), 50 per cent.; killed paratyphoid bacteria, Type A, 25 per cent. and killed paratyphoid bacteria, Type B, 25 per cent. in a vehicle composed of glycerol, 66 per cent.; physiological solution of sodium chloride, 33 per cent., and cresol, 1 per cent. The product is supplied in packages of three vials containing the vaccine, and three vials of sterile diluent with which to make the proper dilution at the time of injection. For a discussion of the actions and uses of typhoid vaccines, see New and Nonofficial Remedies 1920, p. 291. Lederle Antitoxin Laboratories, New York (*Jour. A. M. A.*, Dec. 25, 1920, p. 1783).

PROPAGANDA FOR REFORM

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Linonine (Kerr Chemical Co.), held misbranded on the ground that the curative claims were held false and fraudulent. Valentine's Sarsaparilla Compound with Potassium Iodide (Allan Pfeiffer Chemical Co.), sold under therapeutic claims which were false and fraudulent. Olive Branch (Olive Branch Remedy Co.), misbranded in that the curative claims were false and fraudulent. Prince's Pills, Liniment and Tru-Vigor Nerve Tablets (Boston Drug and Chemical Co.), misbranded in that the therapeutic claims made for them were held false and fraudulent. Mrs. Summers' Absorbent Pile Remedy, Mrs. Summers' Womb, Ovarian and Kidney Tonic and Vitalizer Tablets and Mrs. Summers' Heart, Brain and Nerve Pills (Vanderhoof and Co.), misbranded in that they were sold under therapeutic claims which were false and fraudulent. Compound Syrup of Hypophosphites, Bromo Febrin, Hystoria, Aromatic Cod Liver Oil, Red Cross Kidney and Liver Regulator, White Pine and Tar Syrup, and Boro-Thymine (Cal-Sino Co.), misbranded in that the therapeutic claims were false and fraudulent (some were also held adulterated because their composition was misleadingly or falsely declared) (*Jour. A. M. A.*, Dec. 11, 1920, p. 1663).

PHYSICIAN'S STOCK IN PRESCRIPTION PRODUCTS.—Is the public getting a square deal when physicians are financially interested in the products that they may be called on to prescribe? Is the average layman's confidence in the medical profession likely to be enhanced when he learns that the physician to whom he went for treatment has a financial interest in the therapeutic agent which was prescribed? It cannot be too often emphasized that it is against public interest and scientific medicine for physicians to be financially interested in the sale of products which they may be called on to prescribe for the sick. It is perfectly true that there are many physicians who would not consciously permit financial considerations to warp their judgment, but it is not humanly possible to remain unbiased in cases of this sort (*Jour. A. M. A.*, Dec. 11, 1920, p. 1662).

THE PARRY MEDICINE CO. BARRED FROM THE MAILS.—For some years Pittsburgh has harbored a quack concern known as the Parry Medicine Company. The president of the company was one Leonard L. Parry, who advertised himself as "Dad Parry, the Healer," and also as "The Miracle Man". In April, 1917, Parry, who is an obviously ignorant faker, was arrested and convicted of the illegal practice of medicine and was sentenced to pay a fine and to serve a six-month sentence in jail. Apparently as soon as Parry got out of jail he went right back to his quackery. As a result the federal authorities took action, and the Parry Medicine Company has been denied the use of the mails. The "medicines" put out by the Parry concern were fourteen in number and were numbered consecutively. They were essentially the same in composition, differing only in flavoring. Each was composed approximately of alcohol, 25 per cent.; water, 25 per cent., and olive oil, 50 per cent., to which was added a few drops of essential oils. No. 1 was for Tuberculosis, Lungs, Bones or Flesh, Gallstones or Tapeworm. No. 2 was for Cancers, Adenoids, Hemorrhoids, Piles, Asthma, Goiter, Typhoid and all other fevers. Extensive curative claims were similarly ascribed to the remaining twelve preparations (*Jour. A. M. A.*, Dec. 18, 1920, p. 1732).

GERMAN INSTITUTE FOR EXAMINATION OF PHARMACEUTICALS.—It is proposed that the commission founded years ago by the German internists—the Arzneimittel-Kommission—is to be changed into an institution to investigate new pharmaceutical articles and supply information thereon to physicians on demand. An information bureau and bibliographic center is planned, and it is proposed to test new inventions for the manufacturers. The commission announces that it has been decided not to restrict the examinations to the chemical, pharmaceutical and pharmacologic side of the matter, but in given cases tests and investigations at the bedside will be made. It is stated that the pharmacologic investigations are to be made at the pharmacologic institute of the University of Berlin, which is in charge of Heffter, and that the institute is to be the headquarters of the new Prufungsamt (*Jour. A. M. A.*, Dec. 25, 1920, p. 1791).

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You've Been Waiting for Such a Book

PUBLIC HEALTH AND HYGIENE *By Eminent Authorities*

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Professor of Bacteriology and Hygiene, University and Bellevue Hospital, Medical College; Director of the Bureau of Laboratories, Department of Health, New York City.

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ORIGINAL ARTICLES

RENAL TUBERCULOSIS

ITS EARLY RECOGNITION AND MANAGEMENT FROM THE VIEWPOINT OF THE INTERNIST*

FRANK B. WYNN

INDIANAPOLIS

Tuberculosis of the kidney, like infection from the Koch bacillus elsewhere, may pass through the various pathologic phases from early proliferative changes to terminal necrosis. That this sequence of pathologic change does not always take place is abundantly proved by clinical observation. What abdominal surgeon of wide experience has not seen the peritoneum studded with innumerable miliary tubercles which vanished as if by magic after laparotomy? Not infrequently a diffuse, acute tuberculous invasion of the lungs is seen to clear up beyond our most hopeful expectation. Tuberculosis experimentally produced in animals has been observed to do the same thing. Robert T. Morris injected the parenchyma of the kidney in rabbits with tubercle bacilli. In a month the process was found well developed. The rabbits finally got well. Of the experiment he says: "If these rabbits, depending on their own resources, allowed tuberculosis to get well under way and then placed it under control with their own factors of protection, it is a question if some of our patients with tuberculosis of the kidney, will not be quite amenable to those resources which increase the general resistance of the patient." Reasoning both from clinical experience and experimental investigation is there not ground to believe that new formed tubercles may be eradicated from the renal cortex, especially if treated properly at an early stage?

If the pulmonary apex, in part because of its relative immobility and consequent sluggish circulation, favors tubercular invasion, there is even greater reason for expecting frequent implantation of the tuberculous process in the kidney. The efferent vessels from the glomeruli form an extremely intricate network about the convoluted tubules and down along the loops and into the pyramids—the very regions where new tubercles are most frequently observed. That the tubercular process in the kidney is not discovered early or not at all, argues first our lack of diagnostic skill; or secondly that cure of incipient tuberculosis of the kidney takes place oftener than we have suspected.

Urologists make the observation that patients suffering from renal tuberculosis are often well nourished, especially incipient cases in which mixed secondary infection has not led to extensive inflammatory or necrotic destruction. It is not unreasonable to assume that in incipient cases, the general immunizing forces of the body are good and give hope of successful combat against the invading foe. Unfortunately it is true that the urologist with rare exceptions only sees these cases when rather well advanced, and the cystoscope reveals secondary changes in the urinary tract. This is a reflection upon the general practitioner and internist which should prompt us to greater care and earlier diagnosis. This to the end that not only surgery may have a better chance, but that we also may affect cures in the very earliest cases.

Time was within the memory of some present, when practitioners frequently cloaked their ignorance under such terms as "chronic bronchitis," "anemia," "malaria," waiting for the classical third stage signs before making a diagnosis of pulmonary tuberculosis. With the discovery of the Koch organism a large stride was made toward earlier diagnosis. Then came studies of the pulse and temperature. Still greater laboratory refinement in diagnostic procedure has come in the tuberculin and complement fixation tests—all bringing us nearer to the early recognition of the process when it is possible to subdue the enemy in its infancy. We are no longer content to wait until tubercle bacilli appear in the sputum. We seek to anticipate the stage of pathologic evolution when mixed infection

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brings about disastrous havoc, liberating necrotic debris and tubercle bacilli in great numbers.

Is it not true that the general profession is showing still the lagging and procrastinating attitude toward the early recognition of renal tuberculosis that characterized our action in regard to pulmonary tuberculosis thirty or thirty-five years ago? Too often we have been willing to veil our ignorance with the diagnosis of "cystitis." In the absence of definite urethral or vesical causes every case of frequent and painful micturition which *persists and resists* treatment of simple nature is to be viewed as a potential tuberculosis of the kidney until proved otherwise. All too often such patients are permitted to drift. Meanwhile the patient is allowed to do those things which are apt to convert the simple and perhaps curable condition into a mixed infection with widespread destruction. The urgent cry, therefore, to the general practitioner is to be on guard.

Given a patient suffering from persistent pain and frequency of urination, let there be made the most painstaking study of the urine. It will generally be found to be pale in color, of low specific gravity and with a slight turbidity. Upon standing the haziness slowly disappears —a thin layer settling to the bottom leaving a clear supernatent liquid. The gross appearance is very different indeed from the urine in other infections of the urinary tract. In the latter the turbidity is due to motile organisms which do not gravitate to the bottom of the vessel upon standing. Almost without exception the reaction is acid—a fact of great differential value since other infections tend to produce an alkaline urine. Of cellular elements the microscope reveals pus cells constantly present. They do not stain so readily as those arising from catarrhal inflammation of the bladder or urethra. The pus is readily miscible upon shaking in a bottle, thus distinguishing it from the lumpy, ropy urine of cystitis. Red corpuscles are frequently found, often in sufficient amount to give the urine a faint, diffuse, pink tinge. Occasional renal epithelial cells will be found: less frequently granular or hyaline casts, indicating some irritation of the renal cortex. This array of clinical and urinary phenomena presents strong evidence pointing to tuberculosis of the kidney.

Thus far the observations and examinations detailed are such as any present day practitioner should be able to make. The next step calls for more expert laboratory and technical procedure. If the medical attendant is not competent to do well that which follows, he should call counsel. Repeated search should now be made for tubercle bacilli, using catheterized specimens of urine to avoid contamination with the smegma bacillus. Failure to find the Koch bacillus should not exclude the diagnosis of renal tuberculosis. The truth is that in very incipient cases they are not likely to be found. Inoculation tests may then be made. Catheterized pus cells are injected into the peritoneum of guinea pigs. This is open to the objection that from four to six weeks would be required for demonstration of tubercles in the peritoneum or lymph glands in positive cases. And it has been argued that even a positive guinea pig reaction does not prove tuberculosis of the kidney since it is thinkable that the Koch organisms from some other focus infecting the blood stream may pass into the urine without infecting the renal tissue. By analogy it is argued that in contamination of the blood current with typhoid organisms, the kidney generally eliminates them without becoming diseased.

Even in the absence of demonstrable tubercle bacilli in the urine or positive results from guinea pig inoculations, strong confirmatory evidence will be found in support of the preceding suggestive data, if there is revealed a tubercular family history with possible exposure. Just as significant likewise will be a personal history of repeated "colds"; prolonged pneumonic attack; a scar in the neck or a chronic joint difficulty in childhood. It goes without saying that the most scrutinizing physical examination should be made of the chest and x-ray evidence sought of healed or active lesions.

Any case which presents an array of symptoms at all suggestive of renal tuberculosis should be subjected to cystoscopic and x-ray examination and functional kidney tests. In the hands of one thoroughly competent these may reveal focal lesions and determine the kidney involved.

In the incipient period of renal tuberculosis when diagnosis is difficult and doubtful, the cautious use of tuberculin subcutaneously is of unquestioned value. We are slowly recovering from the wave of prejudice against tuberculin which swept over the profession soon after its discovery. It is gradually but surely coming into its own both in diagnostic and therapeutic procedure. The subcutaneous injection of tuberculin for diagnostic purposes in renal tuberculosis should only be performed in hospital environment and by one skilled in its use. The initial dose will be determined by the age and physical condition of the patient. In the average adult Pottenger advises 1 milligram as the initial dose. If no reaction occurs, in two days from 3 to 5 milligrams are given. No reaction appearing in three days, 7 or more milligrams are administered, 10 being the maximum dose to complete the test. A general reaction with rise of temperature of one or more

degrees is considered positive. Even more important than observation of the general reaction is a careful study of the focal reaction. The latter is evidenced by increased pain in the loin, marked aggravation of the urinary function, increased pus discharge and now tubercle bacilli may be found in the urine.

Complement fixation is the most recent addition to the laboratory methods of tubercular diagnosis. A majority of laboratory workers commend it as invaluable. Craig rates its value in the diagnosis of tuberculosis as fully equal to that of the Wassermann reaction in syphilis. A few doubt its practical efficacy. Whilst the preponderating view of clinical and laboratory workers is that in considerably over half of the cases it will give a positive reaction, it does not possess great value in the recognition of renal tuberculosis. Like the von Pirquet and Calmette reactions, it only points to a tuberculous process somewhere in the body but gives no clue as to its location. Hence inferior practically to the subcutaneous tuberculin test, which gives a focal kidney reaction.

Having established beyond reasonable doubt the existence of renal tuberculosis, it remains for the urologist to determine whether the disease is unilateral or bilateral. Here cystoscopy, functional tests and radiograms offer valuable information which will be considered by others more competent than the writer. If only one kidney is found involved, let us not quibble with the surgeon about the correct procedure. The case is surgical. Dock expresses the sentiment of most internists at the present time when he says: "Extirpation of the affected kidney is conservative treatment."

From the internists viewpoint the incipient case of renal tuberculosis is not without hope when treated with the same care and in similar manner to other tuberculous cases. Prolonged rest, nutritious food and good air will avail even more than in pulmonary cases, since the digestive and assimilative powers are not as a rule impaired. Tuberculin is proving itself valuable, notably in the treatment of tuberculosis of the lymph glands, and in other forms of tuberculosis when carried out under the careful regime of competent institutional management. In any form of tuberculosis that individual most likely to be benefited by tuberculin is the one in whom the functions come near to par. Such a person has a capacity to produce antibodies, and is therefore in condition to give immune response. Fortunately in the majority of cases of incipient renal tuberculosis the strength and natural resistence are good. Hence there is ground to expect benefit from tuberculin treatment, cautiously and wisely applied, under institutional supervision. Combined with rest, proper food and hygiene it is not too much to hope for cure in a limited number of cases. Its use should be encouraged in anticipation of and preparatory to operative measures. Its applicability is evident in bilateral cases and in those who refuse operation. That it often does give brilliant results, even in advanced cases, is attested to by no less an urologist than W. T. Belfield. In a clinic before the American Urological Association in 1911, he presented six cases of urogenital tuberculosis in males treated by tuberculin, in whom such improvement had taken place that he expressed the view that in genital tuberculosis the knife had no place except to remove debris.

CONCLUSIONS

1. Let practitioners and internists take heed early of symptoms suggestive of an incipient and developing tuberculosis of the kidney. Prompt use of every available means of diagnosis should be employed to the end that early diagnosis may be established.
2. When unilateral tuberculosis of the kidney is proved to exist, nephrectomy offers the shortest and surest road to recovery. Dallying in such cases is inexcusable.
3. There is substantial reason for believing that earlier diagnosis in this as in pulmonary tuberculosis, and the faithful and intelligent application of proper treatment—rest, hygienic, dietetic and therapeutic measures—may enable arrest or cure of the disease. But this plan should never supplant surgery when there is proved unilateral tuberculosis of the kidney or there is evidence of retrogressive changes.

RENAL TUBERCULOSIS
ITS DIFFERENTIAL DIAGNOSIS*

BY H. O. MERTZ
INDIANAPOLIS

The portion of the kidney involved, the condition of the ureteral channel, the presence of an associated mixed infection—these are the factors rendering a diagnosis of renal tuberculosis comparatively simple or extremely difficult. A renal tuberculosis extending into and involving the calices and pelvis, resulting in an open tuberculous pyelitis, gives specific evidence of its presence by means of tubercle bacilli in the urine and it is this lesion, whether primary or secondary, that is diagnosed by the detection of this bacillus. Should there exist, at the time of the examination, a closed tuberculous pyelitis or pyonephrosis, no material from the infected site reaching the bladder because of an occluded ureter, the diagnosis can not be made by this means, and a negative urinary examination can be expected in many of such cases. Again

*Second paper in symposium on Renal Tuberculosis read before the Indiana State Medical Association at the South Bend session, September, 1920.

when the primary lesion is a closed parenchymatous tuberculous focus, such evidences of a tuberculous pyelitis are not present, and the diagnosis of this tuberculous process is at present a very different and more difficult problem. Finally, when any renal tuberculosis having free drainage to the bladder is secondarily infected, this superadded mixed infection may give urinary findings of sufficient prominence as to render the detection of the primary infection extremely difficult. Therefore in the differential diagnosis of a renal infection the finding of the tubercle bacillus in the infected urine is sufficient, while its absence in no sense declares it not to be of tuberculous origin.

The symptoms leading one to suspect the existence of a renal tuberculosis have been previously reviewed in this symposium. Our first means of differential diagnosis is the examination of the urine for the tubercle bacillus.

Tubercle bacilli may be detected in the urine by: (1) the staining of the urinary sediment, with the technic of which all of you are familiar, but which knowledge is not uniformly employed as of 24 records studied, in but three was there history of there having been such examinations made before seeking counsel; (2) guinea pig inoculation, which gives positive data in many questionable cases, and which method is probably not employed by the consultant as faithfully as its worth warrants. While occasionally the urine may be comparatively free of pus, in most cases much pus is present when the following method gives best results in securing urinary sediment: A sample of a 24-hour specimen of urine is centrifuged at a speed of 300 revolutions per minute for three minutes. The remaining supernatent, slightly cloudy urine is again centrifuged at a high rate of speed until the urine is clear. This last sediment contains a greater number of tubercle bacilli and is used for staining and inoculation purposes. The difficulty of finding the germ in the presence of marked mixed infection warrants conscientious employment of this method. Dissolving the cellular elements and mucus by the addition of antiformin accomplishes similar results for staining, however this method requires several hours incubation at a regular temperature. In making a differential diagnosis by the staining method there are two possible sources of error: (1) smegma bacilli may be mistaken for tubercle bacilli, and (2) a tuberculous free kidney may secrete the tubercle germ which can be found in the urine. The first is important and it influences the method of collecting urine for a final diagnosis, and the second should be kept in mind as a possibility in the obscure case, but every effort to eliminate an existing urinary tuberculosis should be made before accepting this explanation of the presence of tubercle bacilli in a urine containing other evidences of inflammation.

Many modifications in the technic of guinea pig inoculation have been suggested because of the length of time necessary before a diagnosis can thus be made, and because of its often resulting in failure through early death of the pig from mixed infection. As to the former, this objection is more apparent than real, as it is the obscure case whose symptomatology has covered many months, which most frequently demands this method for other than corroborative data, and a positive diagnosis within this time limit by other means is often not made. It has been asserted that bruising the tissues at the site of the inoculation, as the inguinal glands, or primarily subjecting these to the action of the x-rays, favors invasion and dissolution, permitting earlier detection of the tubercle bacillus. Biologic tests have been applied to the inoculated pig, as if old tuberculin be injected hypodermatically two weeks after inoculation, should there have been a tuberculous process produced, it is claimed the pig's temperature will rise two or three degrees; or should the size dosage be large enough it will fall during the following twenty-four hours and in many cases the pig will die. The von Pirquet reaction may be secured ten days after inoculation and is interpreted as in the human. While these latter are of value, such data can not be so convincing as the finding of the tubercle germ in a typical lesion at autopsy.

The value of the hypodermic tuberculin test in the cases with obscure clinical symptoms, with no tubercle bacilli being found in the urine, whether the result of the location of the process, the mixed infection or an occluded ureter, is illustrated in the following instance: A man aet. 22, six months previous to consultation developed without known cause burning and frequency of urination and two weeks before examination a terminal hematuria. There was no venereal history. The infection was proved limited to the left kidney but the tubercle bacillus could not be found. .5 mg. of old tuberculin injected hypodermatically produced local pain over the left kidney region and an aggravation of his dysuria, which required morphine to quiet. The temperature was elevated. Not considering these data sufficient, the search for the germ in the urine was continued. The patient went elsewhere where similar findings were made and the left kidney was explored as a probable tuberculous organ which it proved to be. It is the focal reaction that is of most value in a differential way and subacute tuberculous processes in other portions of the body contra-indicate its employment.

An accurate differential diagnosis of renal tuberculosis can not be made without a cystoscopic examination and catheterization of the ureters.

Cystoscopic evidences of an existing urinary tuberculosis vary from the single, isolated, specific tuberculous lesion—the submucous tubercle—to a generalized tuberculous cystitis in which the active tuberculous processes in the bladder may be completely overshadowed by the superadded mixed infection, when only the rather typical irregularities of the ureteral meatuses or bladder cavity may suggest the tuberculous nature of the infection. The greatest value of the cystoscopic findings in vesical tuberculosis is not that they enable a diagnosis of the type of infection present, but that they eliminate foreign bodies and tumor growths as the cause of the bladder symptoms while not infrequently indicating the probability of an existing renal infection oftentimes permitting accurate judgment as to the side involved. Finally there are cases of renal tuberculosis in which the bladder changes are so slight and indefinite as to be of no value as an aid in detecting its presence, hence negative cystoscopic finding can not always be considered conclusive evidence of the absence of a tuberculous infection of the kidney.

The active tuberculous lesion in the bladder in renal tuberculosis is most often about or near the ureteral orifice corresponding to the kidney involved. There is probably a rather definite progress of the changes about the opening, and the cystoscopic findings will depend much upon the stage of the bladder infection when the examination is made. The earlier alterations are a more or less circumscribed areolar redness, the subjacent mucosa being edematous with small submucous tubercles in its substance. The orifice may be relaxed. From this point it would seem there are two distinct types of changes—the one tending toward granulation and massive edema formation, the second ending in ulceration and contraction. The former may be so extensive that it will completely hide the ureteral orifice, at times approaching the appearance of a neoplasm and may be mistaken for such. The latter results in distortion of the orifice, which is open and rigid, and as a similar process is usually occurring in the corresponding ureter the tube is shortened so that the orifice will be retracted and drawn far up from its normal position in the bladder. As the disease advances in the bladder its distensibility becomes less and less until but a little fluid will be tolerated at a time, and while this intolerance to distention is valuable in a differential way, it complicates cystoscopy occasionally rendering it impossible until functional rest of the bladder has been established by drainage.

The sub-mucous tubercle is a small grayish-yellow nodule situated beneath the mucous membrane. However, there are other lesions of the bladder not tuberculous in origin that resemble these so closely that a differential diagnosis from this alone may result in error. A tuberculous infection is suggested if when these ulcerate they are isolated ulcerations, the well defined narrow margin of areolar redness about them being surrounded by a more normal appearing mucous membrane; or if it appears to be one-half of the periphery of the nodule that has lost its mucous covering, a more or less crescent-shaped ulceration popularily called the "finger scratch" ulcer resulting; or if the ulceration is situated at the junction of several small arteries.

Ureteral catheterization is the most important single procedure in making a differential diagnosis of renal tuberculosis. By only this means can we know (1) the condition of the ureteral channels; (2) the presence or absence of tubercle bacilli in the urine as it leaves the kidney pelvis; (3) if the infection is unilateral or bilateral; and (4) the comparative functional value of the two kidneys.

While catheterization of the supposedly good kidney is not universally practiced, we do not hesitate to do so and do not see that untoward results have followed. A tuberculous ureter secondary to a renal tuberculosis is usually difficult to catheterize, and urine from a tuberculous kidney may be reaching the bladder and yet it be impossible to catheterize this diseased ureter. This may be the result of the condition of the ureteral orifice, the intolerance of the bladder, a strictured condition of the ureteral channel or the skill of the operator. Oftentimes a ureter which can not be catheterized at the first examination may, after proper preparatory treatment, be readily entered at the second. The ureter may be occluded, the result of inflammatory changes, when an attempt to reach the kidney by catheter must end in failure. Also with a demonstrable tuberculosis on one side, should there be detected a strictured or distorted condition of the opposite ureter, although tubercle bacilli are not detected in the inflammatory products from the second kidney, a most careful investigation is necessary before asserting the process is unilateral. This is equally true in those rare instances of occluded renal tuberculosis on one side with an open ureter on the opposite side, the corresponding orifice being retracted and the urine from this side infected.

An acid fast bacillus found in a urine drawn from an inflamed kidney by a ureteral catheter resting in its pelvis, can practically always be considered the tubercle bacillus, indicating a tuberculous pyelitis. However, it must not only be detected on one side but eliminated on the

other. The study of the urine from the supposedly well kidney is one of the most important problems in a differential diagnosis of renal tuberculosis. Tubercle bacilli will occasionally be found on the supposedly free side only, or a bilateral tuberculosis may exist where but a unilateral disease was expected. A toxic nephritis on the supposedly good side with an inflamed kidney on the opposite side, in the presence of characteristic clinical and bladder findings, although tubercle bacilli can not be found, or when the opposite ureter is occluded, may justify a diagnosis of unilateral renal tuberculosis.

For the functional estimation of the kidneys we rely upon the urea content of the urine and the phthalein output, occasionally supplemented by the estimation of the blood urea. Although the amount of urine is often greater from the involved side, a fact of differential value, there will be a lessening of the urea concentration, and albumin is usually present in the urine from a tuberculous kidney. These are especially valuable observations in the case of a closed parenchymatous tuberculosis, in which the cystoscopic and bacteriological findings are at best indefinite, and they may be the only findings upon which a tentative differential diagnosis can be made.

In conclusion, tubercle bacilli in the urine from a diseased kidney means tuberculosis on this side. Its absence does not eliminate the disease. Cystoscopy and ureteral catheterization are of value in the obscure case and necessary in every case coming to surgery. Not infrequently repeated examinations are necessary and a differential diagnosis may take many weeks, occasionally many months, or may rest upon a justified surgical exploration.

RENAL TUBERCULOSIS
ITS PATHOLOGY*

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It is my purpose in the following pages to present a brief summary of the chief pathological features of renal tuberculosis. A few points and opinions have been drawn from personal experience, but in the main it is the aim to let this discussion reflect as clearly and concisely as it may, the present status of opinion of investigators, pathologists and urologists.

The development of accurate knowledge in this field coincides in point of time with that of the development of modern medicine as a rational science. This took place during the period from 1885 to 1900, and was made possible by the preceding developments in pathology and bacteriology, and particularly by precise knowledge concerning the tubercle bacillus and the characteristics of tuberculous infection in general. In 1883 Babes first demonstrated tubercle bacilli in the urine of a patient with renal tuberculosis, which marks the first application of this valuable diagnostic test. During the period from 1890 to 1900 the modern methods of cystoscopy and ureteral catheterization were developed. Thus our present knowledge of renal tuberculosis, the techniques for its recognition and treatment, represent a superstructure built upon the foundations which were laid during the fifteen-year period beginning in 1885.

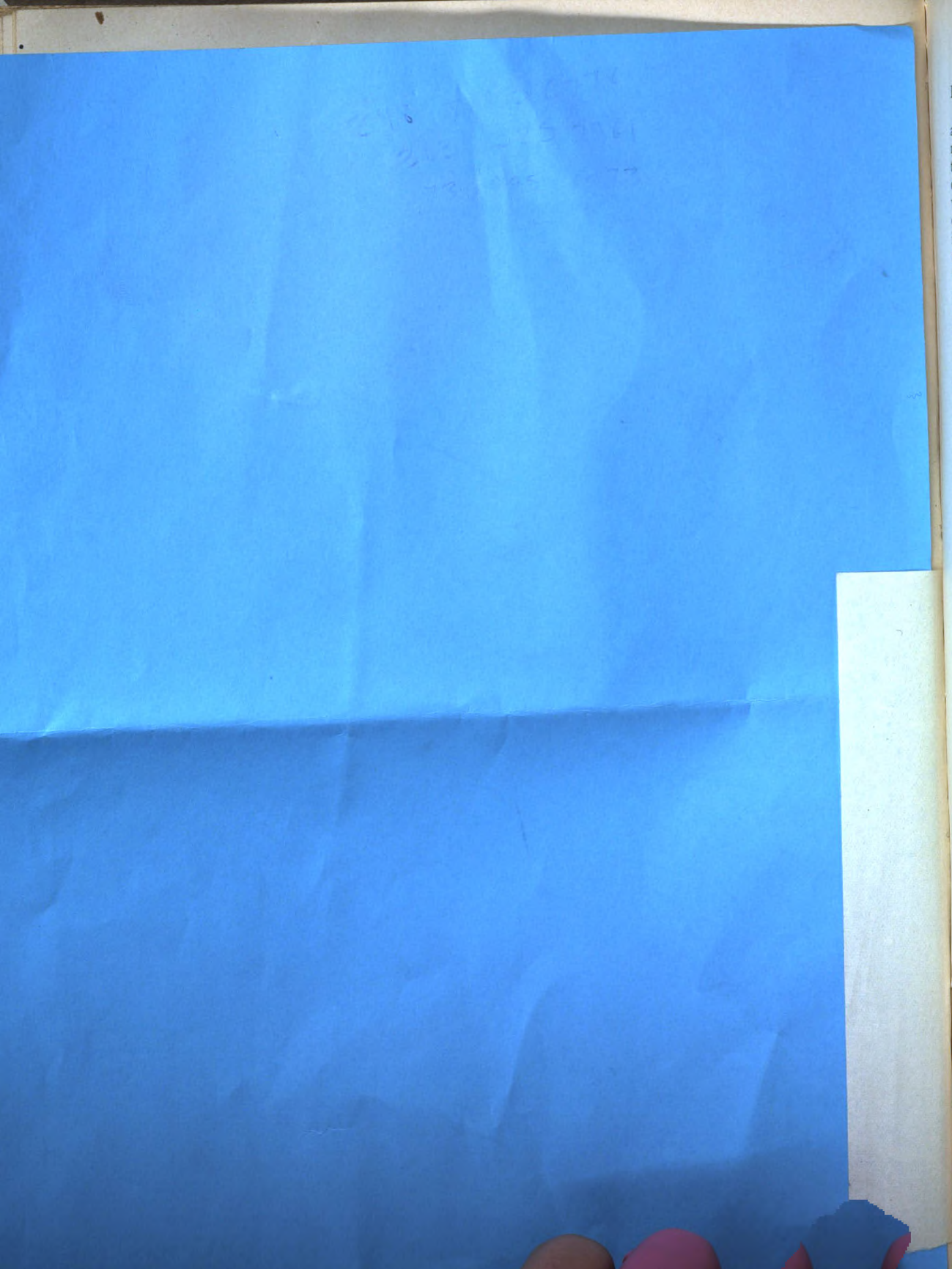
The routes by which tuberculous infection may reach the kidney are: By direct infection from a neighboring focus; infection by way of the lymphatic system; infection ascending from the bladder via the ureters; and infection by way of the blood stream.

A tuberculous infection of the vertebrae or of the adrenal gland or of the lymph nodes or other perirenal tissue may extend and involve the kidney tissue directly. A number of such cases may be found in the literature. One case upon which I performed autopsy examination had an extensive caseous tuberculosis of the left adrenal gland. The infection had penetrated the kidney capsule and extended into the upper pole of the kidney forming a caseous mass 1.5 cm. in diameter. Such cases are not rare, but they represent a negligibly small percentage of the total occurrence of renal tuberculosis.

Infection by way of the lymph vessels is of infrequent occurrence since the lymphatic drainage is from, not toward, the kidneys.

The earlier investigators held that the disease developed primarily in the genital organs or in the lower urinary tract, and spread to the kidneys as an ascending infection by way of the ureters. This view originated by reason of the symptoms of bladder irritation which were a prominent feature in the patient's complaint, and which were produced by involvement of the bladder. As we now know, renal tuberculosis may become very extensive before subjective symptoms are produced, and when such symptoms develop they are due usually to the spread of the infection to the lower urinary tract. The first symptoms being found in the bladder or genitals, the early observers reasoned logically that the primary infection occurred there, and that the kidney involvement was secondary. This view was generally accepted in former years, and evidence of a contradictory character called forth a protracted debate as to the actual route of infection in such cases. The ultimate effect of this debate was good, since it stimulated search for facts to substantiate or refute the theories. Soon it was shown that in

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all cases of tuberculosis of the bladder the kidneys were also involved. This could hardly be the case if the infection originated in the bladder, since some early cases of bladder infection would be recognized before the process had extended to the kidney. Then it was shown that in tuberculosis of the kidney the lower urinary tract was free from infection in about 50% of cases. Obviously these 50% could not be explained as ascending infections. By animal experimentation it was found that infection of an uninjured bladder did not follow the injection into it of tubercle bacilli. Also that when tuberculosis of the bladder was experimentally produced the infection did not extend to the kidneys. In order to produce renal tuberculosis via the ureters it was found necessary to inject the bacilli directly into the ureters and to ligate or otherwise obstruct the ureteral lumen below the injection. By such a procedure infection of the kidney resulted in a fair percentage of cases, but it must be admitted that conditions analogous to these would rarely be present in the human subject. Further it was found that infection of the kidney could easily be produced by introducing tubercle bacilli into the arterial circulation, particularly by making the injection directly into the renal artery.

The consensus of present opinion, based upon human pathology and animal experimentation, is that the blood stream is by far the most important avenue of entrance, and that infection never occurs primarily in the bladder. The possibility of tuberculosis occurring in one kidney, extending to the bladder, and subsequently ascending to the opposite kidney by way of the ureter still remains. But in this case acute retention of urine in the bladder or intermittent obstruction to the ureter would be necessary conditions to facilitate the ascent of the infection. It is probable that few infections occur by this route, the majority of bilateral tuberculous involvement occurring, as do the unilateral infections, by way of the blood stream.

As to the occurrence of renal tuberculosis, there is rather wide variation in the percentages given by different authorities. In 14,500 autopsies quoted from various institutions by Kelly there was an average occurrence of renal tuberculosis of slightly more than 4%. This group of autopsies were of deaths from all causes. The frequency of renal involvement in tuberculous cases varies from 12%, Walker's report, to 33% in Brown's series. The combined average of reported series is about 20%. That is, out of every five cases of active tuberculosis, one case on the average will have renal tuberculosis. In considering these figures it should be borne in mind that they necessarily include many cases of generalized miliary tuberculosis, in which condition a bilateral miliary tuberculosis of the kidneys occurs in almost every case. Miliary tuberculosis occurs frequently in children and hence the renal involvement is high in this group. On the other hand the caseous or caseo-cavernous type of renal tuberculosis is a disease of young adult life. It is rare in children and uncommon in old age. Wildbolz, in 315 cases, found 224 between the ages of 20 and 40.

On entering the kidney by way of the blood stream the tubercle bacilli are most frequently lodged in the narrow capillaries of the glomeruli, though they may lodge in other parts of the parenchyma as along the course of the uriniferous tubules. These points then are those in which tuberculous infection of the kidney most frequently begins. It has been shown that tubercle bacilli may pass through the capillaries of the glomeruli or through the epithelium of the tubules and into the urine without producing foci of infection in the kidney. Walsham demonstrated tubercle bacilli in the glomeruli and in the epithelium of the tubules in cases of active tuberculosis in which there were no demonstrable kidney lesions. Foulerton and Hillier inoculated guinea pigs with the urine of 18 cases of pulmonary tuberculosis. Nine of the pigs developed tuberculosis, and three of the cases from which they were inoculated showed no trace of renal tuberculosis at autopsy. Fournier and Beaufume were able to demonstrate tubercle bacilli in the urine of almost every case of pulmonary tuberculosis by guinea pig inoculation. This is a significant finding, and calls to mind the demonstration that tubercle bacilli may pass through the intact mucosa of the bowel without producing a lesion. Also that in active tuberculosis of cows the bacilli may frequently pass through into the milk without producing tuberculosis of the udder. Apparently it is possible for tubercle bacilli to be absorbed through the bowel, secreted into the milk or excreted into the urine without producing local infections of the tissues through which they pass. This fact is of further significance, since it indicates that the finding of tubercle bacilli in the urine by animal inoculation does not necessarily mean tuberculosis of the kidney.

Tuberculosis produces the following types of infection in the kidneys:

(1) Miliary tuberculosis, in which numerous small tubercles are widely scattered throughout the kidney substance. The characteristics of these lesions are not different from those occurring in miliary tuberculosis of other organs. Typically there is some epithelial proliferation, an accumulation of large mononuclear or "epithelioid" cells, surrounded by varying numbers of lymphocytes. Giant cells may or may not be present, and necrosis or caseation is usually

found in the older lesions. Miliary tuberculosis of the kidneys is only one of the manifestations of a general miliary tuberculosis. It is blood borne in distribution, is bilateral almost without exception, and is said to be uniformly fatal. I have been unable to find a reported case of recovery. The condition is of no practical interest to the surgeon.

The caseous, or caseo-cavernous type is another form of renal tuberculosis. This begins as a solitary focus near the base of a papilla, usually in the upper or lower pole. It spreads by three routes: First, by enlarging peripherally it involves progressively more and more of the adjacent tissue. Central necrosis and liquefaction in this nodule produces abscess formation; second, the abscess may open and discharge into the kidney pelvis at which time the urine would contain quantities of pus, debris and tubercle bacilli. Before rupture of the abscess occurs the infection has usually been carried by the urine into the pelvis giving rise to extensive tuberculosis of the lining of the pelvis and of the ureter. Extension of this infection widens the calices and encroaches upon the cortex. The third route of spread is toward the cortex by way of the lymph vessels. Wedge shaped areas of radiating white lines are frequently seen, the apex of the wedge being the original infection, and the base being the cortical surface of the kidney. On reaching the surface the infection spreads readily, extending between the capsule and the cortical surface.

Caseous tuberculosis of the kidney is a progressive process, beginning with an almost invisible focus of infection and ending with complete destruction of the organ. Intermediate stages of all gradations between these extremes may be found at operation or post-mortem. As the process extends, massive areas of infection are formed which eventually become caseous resulting in progressive destruction of kidney tissue, the end point of which is a tuberculous pyonephrosis, in which the organ has the configuration of a multilocular cyst. The cavities of this are usually communicating, and are filled with thick, pasty, tuberculous pus and tissue debris. This type of tuberculosis in any of its stages is spoken of as "Surgical Tuberculosis of the kidney," to distinguish it from the miliary type which is not amenable to surgical treatment. In about 55% of cases this type is limited to one kidney. The end point of the process above described, in which the organ is represented by a thick fibrous wall enclosing irregular cavities of pus, and in which the ureter and blood vessels have become transformed into fibrous cords, represents as near an approach to healing as probably occurs. Such a result is not really healing, but represents a successful attempt on the part of the body to wall in the infection and thus prevent its direct extension to adjacent tissues. This end point is sometimes spoken of as "autonephrectomy." Most authors claim that healing of a tuberculous focus in the kidney, except as just described, does not occur. However, there are sometimes found in the kidneys of tuberculous patients, small areas of fibrous scar tissue in which no active tuberculosis is present, and which, if a tuberculous origin could be established, would be considered as healed lesions of tuberculosis. The burden of proof is here placed upon the investigator, and in order to establish that spontaneous healing has occurred he must establish: (1) that those lesions are of unquestionable tuberculous origin, and (2) that no focus of active tuberculosis remains in the organ. The latter point could only be established by making serial microscopic sections of the entire organ and examining each one thoroughly for tuberculosis. To examine one kidney in this fashion would require a minimum time of five years. Obviously most investigators prefer to admit that even small tuberculous foci in the kidney do not spontaneously heal, though the possibility remains that such healing may, though rarely, occur.

Tuberculosis of the kidney sometimes involves adjacent structures by direct extension, producing perirenal abscess. This complication is uncommon, and when it occurs is more often a mixed infection of tuberculosis with pyogenic organisms. It is readily understood that mixed infections of tuberculosis with other organisms will produce wide and extensive variations in both the character and course of renal tuberculosis. That in caseous tuberculosis of the kidney the ureter and lower urinary tract are regularly involved is understood.

RENAL TUBERCULOSIS

VALUE OF ROENTGENOGRAPHIC DIAGNOSIS*

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Several articles were published last year concerning the value of roentgen findings in the diagnosis of renal tuberculosis. These articles by Braash and Olson of the Mayo clinic, and Colston and Waters of Johns Hopkins, are the first that I have seen on the subject. Burchard, a foreign writer, has made a thorough review of the literature. The majority of urological men in this country have not appreciated the importance of the x-ray diagnosis and there has been little said of its value in renal tuberculosis. The x-ray has been limited to the diagnosis of renal calculi, bladder stones and

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maybe now and then the making of a pylogram. New and modern apparatus, the double intensifying screen with duplitized films, and the use of suitable opaque solutions have made a great change toward better diagnostic roentgengrams.

Some of the larger clinics have every case of suspected tuberculosis of the kidneys given a thorough roentgenographic examination of the urinary tract. At the Methodist Hospital in Indianapolis the urologists have given the x-ray department every chance at their suspected cases and in a large per cent. we have given them valuable help. In several cases impossible for them to diagnose we have been able to show calcifications in the kidney or ureter. The Mayo clinic has been able to show 22 per cent. of positive shadows and signs of tuberculosis. One out of five subjects with renal tuberculosis will have positive roentgenographic data of definite diagnostic value. The value of the x-ray has been summed up by Braash as follows:

1. When, because of contracted condition of the bladder or impassable stricture of the ureter, the cystoscopic findings are inadequate.

2. When the cystoscopic findings are not typical of renal tuberculosis.

3. When the clinical findings are not suggestive of renal tuberculosis or of any involvement of the urinary tract as may occur with closed tuberculous pyonephrosis.

4. In the presence of bilateral renal tuberculosis, when the typical shadows frequently render cystoscopic or further examination unnecessary.

When any of these four conditions present themselves, we have found the x-ray of particular value. It is in these cases we try to show the kidney shadow, or areas of calcification by taking a series of films of different densities by using filters. We sometimes take six to ten films of the one kidney region and a series covering the entire urinary tract. A close study of these films is very necessary, watching for any calcification along the tract of any prominence or mottling of the kidney shadow. The proper illumination of the film is very important in this study.

The shadows found are caused by the deposit of calcium in the tuberculous area. They are more or less characteristic in that they vary in size, shape and density and are irregular and definite in outline. They do not have the appearance of renal stones but of course in some cases they are very hard to differentiate; then the clinical picture must decide. The shadows on the plate are seen either as single or a few localized areas, or as multiple small areas which are scattered one centimeter or more in diameter.

The first type of small shadows are usually found as punctate spots in one of the poles of the kidney. Occasionally we find them to be large, irregular and of various densities which involve a large part of the kidney. The size of the shadows does not as a rule decide the amount of tuberculosis in the kidneys.

It is of utmost importance in making roentgenographic examination of the kidneys that the patient be prepared by having a dose or more of the compound licorice powder before the examination so that the bowels are well cleaned out. Enemata and salines are all liable to give poor plates because of the retained water and gas in the bowels. If proper preparation is not done the kidney shadow may not show on the plate, and if it does there may be shadows of fecal matter that will look like calcifications. Sometimes the shadow of the kidney is slightly exaggerated in one area; in this case we must be suspicious and a series of films is advisable. It is always good to examine the other kidney; at times the shadow of the opposite kidney will show hypertrophy.

The pylogram is another means of diagnosing renal tuberculosis. This procedure is no longer dangerous if one selects his cases carefully, and uses good technique. I have been present at a large number of injections and with the present careful watch of the patient for pain in the kidney region, I have yet to see a bad result. Measure the amount of the opaque solution injected. In cases where the approximate size of the pelvis is not known the injection can be done under the fluoroscopic screen to a good advantage. The use of thorium, sodium or potassium bromide in 15 to 25 per cent. solution has made the work safer and there is never the bad after results that we used to have with the thick solutions of colorgol, argyol, and cargentos. The thorium, sodium, iodide or bromide solutions can be withdrawn as soon as the plate is made, and there is no plugging of the ureter or acute hydronephrosis produced from the examination. The pylogram in renal tuberculosis gives usually a large inflammatory pelvis with some irregularity, lengthening of the major calices with bulbuous dilitation of the tips, and now and then denser areas where there is cortical necrosis. The ureter may show dilitation and stricture. The calices in early cases show irregularity of dilitation. The disease may be confined to one or two calices and may give a moth-eaten appearance at the apices with some extension into the parenchyma.

In the advanced forms we have the necrotic areas filling up throughout the kidney or all coalesce to form a large sac. As the disease advances we find the ureter to become dilated from the inflammatory process and in some cases from stricture formation, we may have calcification of part of the ureter. The bladder

will also show irregular contraction on one side. Cystograms using air or opaque solution are very helpful. The opaque solution will cause the ureter to fill sometimes to the kidney pelvis. Air may give the shape of the bladder which is an aid in showing calcified areas or calcification of the lower ureter.

CONCLUSIONS

1. The use of the x-ray in diagnosing renal tuberculosis is new and is not yet appreciated.
2. By the use of filters and different penetrations, a series of films of different densities of the entire urinary tract should be made in all suspected cases of renal tuberculosis.
3. One out of five cases of renal tuberculosis will show definite roentgenographic signs. Other methods of diagnosis may have failed and the x-ray alone may diagnose it.
4. Proper illumination in the study of the films is of the utmost importance. The shadows found are caused by the deposit of calcium in the tuberculous area. They may vary from small indefinite punctate areas to the characteristic lobulated, mottled shadow which is typical of a completely destroyed kidney.
5. Preparation of the patient for the examination is very important.
6. Pyloscopic and pylographic examinations are of value in early inflammatory infection of the kidneys.
7. Cystogram of air and opaque solutions are helpful in showing the bladder conditions.

RENAL TUBERCULOSIS

ITS SURGICAL TREATMENT*

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The possibility of spontaneous cessation of symptoms, and return to apparent health, in renal tuberculosis must be admitted; but dependence upon general measures of treatment to effect a cure is dangerous, because of the progressively destructive character of the disease.

To depend upon clinical signs for healing of renal tuberculosis, one must apply the most rigorous tests and even if they seem to indicate healing, the process may be upon the point of becoming more active and fatally so.

Often these supposed cures consist in exclusion of the tuberculous focus, the apparent cure being obtained at the price of functional suppression of the organ. Some of these cases in whom the excluded kidney gives the illusion of a cure have all the appearances of having regained health. Sometimes symptoms have ceased to exist for a long time—ten, twelve or more years. Such remissions are characteristic of the slow evolution of the disease. That the apparent cure, by excluded kidney, is but a delusive appearance is demonstrated by the nephritic alterations developing in the other kidney as a latent factor rendering the existence of the individual extremely precarious. The process of exclusion of a tuberculous kidney is capable of explaining the subsidence of urinary symptoms, but it should not be considered as a curative process in the real sense of the term.

In exceptional cases, ureteral catheterization has enabled one to collect from a kidney, previously determined to be tuberculous, absolutely clear urine, proving both the disappearance of infection and the persistence of kidney function. This is the indispensable criterion necessary that a cure be considered as real.

Heitz-Boyer[1] has shown that in such cases the cure implies not necessarily a curative process in the sense that there is a retrocession of the lesions with re-establishment of function of the affected part, but that it may be the question still of the phenomena of limited exclusion—this time of the diseased portion of the kidney.

Recognizing that an improvement in general condition followed the use of tuberculin in many cases, Wilbolz[2] thought that a corresponding healing might take place in the infected kidney. In four cases, he used tuberculin for two to twelve months before operation with improvement in general health and with some benefit as regards symptoms. He did a nephrectomy in all of these cases and examined the kidneys carefully to see what, if any, healing had taken place. Nowhere was he able to find evidence suggesting a true healing process.

The same author[3] records his conversion from medical to surgical treatment of renal tuberculosis. He cited 78 cases, which three years after nephrectomy were divided as follows: 59% alive and cured; 21% alive and tuberculous; 20% dead. To compare with these, he collected 316 cases under observation in sanitoria. 70% of these died within two years, and of the 95 survivors, 65 still suffered from urinary tuberculosis, while only 30 had been relieved of their symptoms. In 16 of these the clinical cure had persisted for over five years, but after years of apparent cure, sudden breakdown and death were known to have occurred.

Cabot and Crabtree[4] express the view that "the tendency to watchful waiting which was generally but another name for medical procrastination, has considerably abated, and there is practically no difference of opinion among

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1. M. Heitz-Boyer; Jour. de Urol. No. 2, 1912.
2. Wilbolz; Wien. Med. Wochnchr. No. 3, 1911.
3. Wilbolz; Correspondenz-Blatt, Schweitzer Aerzte, Dec., 1912.
4. Crabtree and Cabot; Jour. S. G. & O. 1915, XXXI, 669.

those qualified to express one, that in unilateral renal tuberculosis operation affords the only chance of cure."

Technique: The lumbar approach is usually chosen. A few surgeons prefer the trans-abdominal route on the belief that the operation can be more completely accomplished, i. e., the kidney and the entire ureter may be removed through one incision of moderate extent. Also, in cases where the kidney is considerably enlarged and adherent to important structures, lessened danger to these structures is claimed. Ordinarily, however, the oblique loin incision with variations to fit the individual case, will give access for removal of a much enlarged kidney.

The management of the ureteral stump has received wide discussion. The variety of ways suggested indicate that the ideal method has not been attained.

The more extensive operation for complete removal of the ureter may possibly hasten healing of the bladder infection and help to prevent wound infection and sinus formation, but reports do not indicate an advantage sufficient to offset the added severity of the operation.

Complete nephro-ureterectomy, including a portion of the bladder wall, did not accomplish the hoped-for results in that it did not prevent sinus formation.

Braasch,[5] commenting upon the results obtained at the Mayo clinic, says: "Ureterectomy did not seem to affect the aftercourse materially. In 14 patients in whom ureterectomy was done with the nephrectomy, the sinus persisted fully as long as in the others."

Isreal[6] believes that tuberculosis of the ureter will be cured spontaneously after nephrectomy in the majority of cases; that fistulae will develop in 11.5%, mostly healing within four years; and that the method of providing for the ureter has no marked influence upon the frequency of fistulae formation.

Most surgeons are content to remove as much as possible of the ureter through the lumbar incision. This is usually to the pelvic brim or just below. A long stump may not be more infectious than a short one, but the pathological condition of the ureter should modify the technique. Albarran advises resection of the ureter, if it is very thick and the lumen on cross section is dilated, on the belief that it is this type of ureter which allows bladder urine to flow upward and infect the wound.

Injecting the ureter with carbolic acid and fixing the ureteral stump to the skin in the lower angle of the wound have been advocated to promote more rapid healing of the ureter and as a means of preventing wound infection.

The removal of fatty capsule, or as much of it as possible without injury to surrounding structures, will help to prevent wound infection and fistula.

Closure of the wound without drainage apparently tends to prevent secondary infection, and primary healing takes place in a fair proportion of cases. Cabot and Crabtree[4] observed in a series of 70 cases that approximately 25% healed by first intention and 75% developed fistula irrespective of the method of wound closure employed. In undrained wounds, sinus formation may occur as a late development.

Contra-indications to nephrectomy: Any general condition, contra-indicating a major operation; the existence of active tuberculosis elsewhere in the body, (as active pulmonary tuberculosis), advanced tuberculosis of the opposite kidney or marked nephritis or any lesion greatly decreasing its function, are contra-indications to nephrectomy for renal tuberculosis.

Observation of decided improvement in the function of the remaining kidney, in cases of bilateral renal tuberculosis, after removal of the worse affected one and the subsidence of symptoms with a tendency to general improvement has led surgeons to a more favorable view of nephrectomy where bilateral involvement exists.

Keyes[8] states, "Involvement of the other kidney was for a long time considered a contra-indication to nephrectomy. This it certainly is not. If there is no great difference between the functional capacity of the two kidneys, there is quite obviously no reason to remove either one of them. But if one is gravely affected, the other only slightly involved, the gravely affected one should be removed. Half the cases of bilateral renal tuberculosis with grave unilateral involvement will not only survive, but will be greatly improved by operation."

Mortality: Cabot and Crabtree's[4] series of 103 cases (1915) showed an immediate mortality of 3.8% and 60% cured after two years.

Isreal[6] collected 1023 cases of nephrectomy for renal tuberculosis with a mortality of 12.9% in the first six months after operation and as many more later.

Eisendrath,[7] from a study of 1500 nephrectomies, concludes that in unilateral renal tuberculosis, the operative mortality in the early months of the disease is only a little over 2% and that the remote mortality is not much higher.

Braasch[5] reported 203 nephrectomies for tuberculosis at the Mayo clinic (1912) with an immediate mortality of 2.9%. In summarizing results, he concludes that the operative mortality is a negligible factor and that a permanent

5. Braasch, W. F.; Jour. A. M. A. 1912, LVIII, 397.
6. Isreal, J.; Folia Urologica, Sept., 1911.
7. Eisendrath, D. N.; Interstate Med. Jour. 1913, XX, 299.
8. Keyes, E. L. Jr.; Urology, 1919.

cure can be expected in 75% of patients operated upon.

In early cases, before the ureter and bladder are markedly involved, improvement after nephrectomy is rapid. The majority of cases, however, seek relief only after severe bladder symptoms have developed and in these, improvement is usually slow and the persistence of symptoms after operation is generally in proportion to their duration before operation.

CONCLUSIONS

1. In unilateral renal tuberculosis, early nephrectomy is indicated and affords the only assurance of cure.

2. When both kidneys are infected, nephrectomy is contra-indicated, unless one is practically destroyed and the other still has good functional capacity.

3. Urinary symptoms usually persist after operation in proportion to their duration before operation.

4. Under tuberculin treatment, proper dietetic, climatic and hygienic management, many cases will be improved, but are likely to have recurrences later on. Supposed cures are generally an expression of the phenomenon of excluded kidney.

5. 75% of cases of unilateral renal tuberculosis will be cured by nephrectomy.

DISCUSSION

DR. CHARLES G. BEALL (Fort Wayne): I believe if the kidney substance were removed from these beautiful slides of renal tuberculosis we have seen here that very few, if any, pathologists could tell us if these tubercles were developing in the kidney. The point I want to make is that tuberculosis of the kidney has the same pathological development and the same retrogressive processes as in any other part of the body. While we have no positive evidence that tuberculosis of the kidney does heal, yet reasoning by analogy, as Doctor Wynn has brought out, we are certainly inclined to think it can heal. We do know that the tubercle can heal in the lung and leave nothing but a scar; it can heal in the peritoneum and leave absolutely nothing, so we believe it is possible and probably many times does heal in the kidney without leaving any trace of it.

I think a splendid argument in favor of this view is the fact that 20% of individuals who die of other than renal tuberculosis show renal involvement, but certainly nothing like 20% of individuals in the tuberculosis sanitaria have clinical renal involvement. I do not know the exact percentage, but I should think not over one or two per cent. Do not think I am arguing that nephrectomy should not be done in tuberculosis. I am mentioning facts that will bear thinking about. The chances are that in most cases where diagnosis is possible the tuberculous process is far advanced.

As to the ideal treatment, there is no question that when the tuberculous process is advanced and unilateral, the kidney should be removed. I would not agree with the statement that it is the only procedure which will give that individual a chance for cure. We know that cures are obtained otherwise. This certainly would give the individual the best chance to get rid of his tuberculosis.

In regard to the use of tuberculin, I want to re-emphasize what Doctor Wynn has said. Let me tell you a little story. One hundred individuals in an institution who were under perfect control were given regular subcutaneous tuberculin tests. Twenty-five per cent. of these individuals—mostly young adults and children—reacted positively. In other words, we had 25 positive tuberculin tests out of these one hundred people. Three years later those individuals who had had this test were carefully gone over, and of the one hundred but two had developed clinical tuberculosis, or active tuberculosis. So we must not assume that the individual who reacts to tuberculin has clinical tuberculosis. On the other hand, the point that Doctor Wynn emphasized particularly is the fact that if we get a focal reaction that is of the utmost importance.

I think the urologist now occupies the same position with relation to the internist as does the ophthalmologist. They have opened an entirely new view of the human body, that of the genito-urinary tract. It is one of the most wonderful developments of the past twenty years.

I used to be afraid of these procedures. It looked like a serious undertaking to do a cystoscopy and make a pyelogram of the kidney. I have been disillusioned. It is comparatively simple. I do not mean it does not require great skill, for it does, but in the hands of a skillful man I would not hesitate. But we must assume the attitude that we must get these cases early when they are curable.

When the tuberculous kidney is removed you have just started to cure the individual; you have not cured him. That individual needs six months, a year or even two years further treatment before he is well.

DR. CHARLES C. TERRY (South Bend): Unfortunately, the x-ray does not always show the extent of tubercular invasion of the kidney. In pulmonary tuberculosis there are usually symptoms and signs that on physical examinations give us some clue as to the extent of the

pathology, but that has not been true in tuberculous disease of the kidney. As was stated by one essayist, the urinary findings in tuberculous lesions of the kidney oftentimes mislead us very much. The kidney may be involved to a considerable extent, and the invasion travel down the ureter until drainage is interfered with, and our urinary findings will not lead us to believe that there is extensive invasion or destruction of the kidney. I certainly hope the x-ray men will in time give us something that will furnish some clue as to the extent of the trouble.

We all know that in a case of low grade tuberculosis of the kidney the patient may be in surprisingly good condition; much better than we have reason to suspect after exploration of the kidney shows it to be in an extensive degree of degeneration.

Personally, I have not much faith in medical treatment of tuberculosis of the kidney, but I do believe that the sooner it is dealt with in a surgical way the better. When we operate these cases, early nephrectomy is not such a difficult operation, and even in cases of pulmonary tuberculosis may be operated with a fair degree of success. But of course ordinarily that is not to be recommended.

As regards cystoscopy, the previous discussant stated that it is a simple procedure. It is a simple thing for the man who is doing it every day and several times a day. It is easy enough to look at these plates and think you can make a differential diagnosis with the cystoscope, but if you do not do a considerable amount of cystoscopy, enough to train your eye, you will find that your findings are confusing, and unless you have a man who is competent with the cystoscope I think it is a good deal like a pathologist who is incompetent — leads you into wrong paths a good many times in your surgery.

The technique of cystoscopy is delicate and requires a great deal of skill. The man who takes considerable time to do his work will have a certain amount of traumatism of the ureter and that is detrimental to the patient.

I believe in early operation in tuberculosis of the kidney the same as in other conditions where surgery is indicated. I believe also we should follow the same procedure as in conditions in the abdomen, and where there is doubt as to the diagnosis I can see no objection to exploring that kidney, because we cannot by palpation or other methods determine the extent of pathological changes. I prefer to do an exploratory operation.

DR. H. K. BONN (Indianapolis): Doctor Hamer has told us that 50% of bilateral renal tuberculosis cases are operable in that you can take out the kidney which is most diseased and there will remain enough good renal tissue in the other kidney to sustain function. I desire to direct your attention to a new palliative surgical procedure suggested by Rosenkranz for cases of bilateral inoperable renal tuberculosis.

This procedure consists of making a subcutaneous bilateral ureterostomy, that is, the ureter is implanted subcutaneously. Rosenkranz has made this operation in twelve or fourteen cases of inoperable bilateral renal tuberculosis, or inoperable vesical carcinoma.

An extraperitoneal dissection of the ureter is done, the ureter picked up, the bladder end of the ureter ligated and the renal end conducted through the abdominal and implanted subcutaneously. The site of implantation should be below the level of the umbilicus. The operation may be done in two stages, if desired, one ureter being implanted at each stage. Rosenkranz passes a No. 6 or No. 8 French scale, soft rubber catheter into the pelvis of the kidney, through the ureter. This catheter drains into a receptacle fastened to the patient's body by some device. Thus the tuberculous urine, pus and blood does not touch the skin, the patient is comfortable and free from pain and without bladder tesenmus and distress.

Rosenkranz acknowledges that this surgical procedure has a limited field of usefulness, being applicable only in those cases of inoperable bilateral renal tuberculosis or allied conditions. Yet, for the specific indications mentioned, the operation affords a definite palliative result.

DR. P. E. MCCOWN (Indianapolis): I want to ask Doctor Mertz and Doctor Moon how many smegma bacilli they have seen. I do not believe I have ever seen a smegma bacillus that I knew was one that somebody had not already growing in the laboratory. The reason I speak of this is the fact that I believe they are very rarely found in the urine. There has always been a discussion about the careful differentiation of the smegma bacillus from the tubercle bacillus. I believe it is a good rule to follow in any urinary condition that is suspected of being tuberculosis that if we find acid fast bacilli in the urine we had better regard it as tuberculosis, because I have tried on a number of occasions to locate the smegma bacillus by examination, but have not been able to find it yet. I believe we can, for the purpose of getting early diagnosis of this condition, practically disregard the smegma bacillus. At least we can if we have a specimen of catheterized bladder urine.

Dr. Wynn stated that with an acid condition of the urine you could feel pretty sure you had tuberculosis. There is one other organism found in acid urine, and that is the colon bacillus. It is not difficult to differentiate this, however,

by the staining method. As to finding the tubercle bacilli in the urine, there is one thing I want to emphasize and that is if we have a urine in which we do not find any bacteria, if it is acid we had better make another stain. We had better, as Dr. Hamer said, make repeated stains day after day for three or four weeks. Many times you will find the tubercle bacilli in the tenth or fifteenth stain. There are certain days when the tubercle bacilli will come away, and not on other days. Tubercle bacilli are more readily found in the pelvic form of renal tuberculosis; in the cortual type, they may not get into the urine and the diagnosis is more difficult.

Doctor Beall made the statement that renal tuberculosis occurred in a small percentage of sanitarium cases. Shapiro three or four years ago found urinary symptoms in 10% of the cases of general tuberculosis. So I really believe it is more prevalent than the average individual thinks it to be.

In regard to the administration of tuberculin. In the younger patients with tuberculosis of the kidney the staff of the Massachusetts General hospital advises giving a series of tuberculin injections before nephrectomy. In other words, they believe that the young patient has not gained an immunity to his tuberculosis, and expect the second injections to build up sufficient immunity so that the shock of nephrectomy will not cause a generalized miliary tuberculosis which is possible to follow in such instances. It is advisable to use tuberculin, as Doctor Beall said, for some time after the removal of the kidney. As he well said, removal of the kidney is the beginning of the cure of renal tuberculosis, but by removing the massive portion of the infection Nature is given an opportunity to overcome the remaining focus.

I would like to speak of the question of anaesthesia in this operation. These patients should not be given ether. It is best to use novocaine locally, and nitrous oxide-oxygen for general administration. I think ether has a tendency to stir up lung tuberculosis and it is quite true that a majority of these cases are secondary infections from the lungs or some other part of the body.

DR. BERNHARD ERDMAN (Indianapolis): I feel very sure that the statement which was made by one of the discussants that the diagnosis of renal tuberculosis with the cystoscope is a simple matter will be disagreed with by many. It is not a simple matter at all. As a rule we have two types of individuals coming to see us. One is the individual who has had haematuria. It seems to be pretty clearly settled that the individual with blood in his urine has an immediate and unfailing desire to visit his doctor, because he knows that blood in the urine is not normal. Such an individual, particularly a young man or young woman, in whom you can demonstrate absolutely the absence of stones and stricture, should have the most careful and constant supervision over a considerable period of time, and it necessitates mechanical as well as physical methods for making a diagnosis. The other type is the individual who for a long time has had burning, foul urine, in which we suspect bladder tumor, foreign bodies in the bladder, or something of that sort; but I do not believe this patient offers the difficulty in differential diagnosis that the younger individual does.

Recently I had occasion to consult with some men with whom I have become acquainted in the West and who I know have a good deal to do with renal tuberculosis, and a measure was suggested to me which has given most surprising results. That is, one hour before making your cystoscopic examination insert into the bowel a suppository of one grain of opium and one-eighth grain of extract of belladonna. Then after thirty minutes instill into the bladder one ounce of a solution containing thirty grains of antipyrin. This has been used by the French for some time. It is surprising with what comfort a number of these individuals can be cystoscoped if one has judgment when to do this.

The tuberculous focus in the kidney which has not invaded the pelvis offers a field for a vast amount of work and sometimes makes it absolutely impossible to establish your diagnosis. It is not at all an easy thing to settle the question of renal tuberculosis, and after you have settled whether it is unilateral or bilateral you must, if unilateral, work out the function of the opposite kidney and then decide what will be the best opportunity for your patient.

DR. A. C. KIMBERLIN (Indianapolis): The prevailing tendency is to regard renal tuberculosis as a primary disease, which is certainly quite the exception. Next is the responsibility of the man engaged in the practice of general medicine—the family physician—if there be such a thing any more—to not overlook the fact that much depends on his ability to do good diagnostic work before his patient passes into the hands of those who specialize, as most of the men do who have presented this subject. Too, such a presentation as this should not in any manner discourage one doing general practice.

While such diagnostic methods and studies as have been presented are not always possible for the family doctor there are many signs and symptoms sufficiently diagnostic of renal tuberculosis to almost justify calling them the kidney cough, as they bear the same relation to renal

tuberculosis as ordinary cough does to the pulmonary type.

All know that pulmonary tuberculosis in the adult is practically never a primary disease—always a recurrent infection from an early glandular invasion, which dates its beginning in childhood if not in infancy.

While a physical examination may enable an ordinary physician to make a finished diagnosis of pulmonary and renal tuberculosis, he should always keep in mind the importance and value of a carefully taken clinical history, which investigation should extend back to the childhood of the individual. One must antedate the history of the present illness in their patient for like psychoneurotics the family history and that of early childhood is ofttimes the most valuable evidence on which to base one's diagnosis.

To be sure we all greatly appreciate this morning's presentation as it is characteristic of modern medicine to speak in figures rather than in generalities. We no longer speak of cardiac hypertrophy, only for what it suggests to the mind. We not only think of high blood pressure now in connection with cardiac hypertrophy but investigate the presclerotic stage, the stage of hypertension, and the secondaries, or stage of complications. All this has been made possible by the use and teachings of the blood pressure apparatus.

The point to emphasize in making a correct diagnosis of renal tuberculosis is that the general practitioner should realize that the early clinical history is of most importance.

As to treatment: While there is no medical treatment except for complications, climate and hygienic treatment at times certainly yields most satisfactory results. Tuberculin intelligently though cautiously used in tuberculosis of the genito-urinary tract has an established value, but one should not overlook the danger incident to its use as once so strongly emphasized before this society by the late Dr. Potter.

DR. R. C. BEELER (Indianapolis): In my paper I failed to speak of one important thing and that is that if you have your x-ray at hand it is a mighty good thing to study your chest as well as the gastrointestinal tract, because in some of these cases the kidney will not show and you can sometimes locate a focus that will be pretty positive for tuberculosis and thus help you in your diagnosis.

The preparation that I spoke of is the most important thing of all. We have cases where we get no results from examination because of lack of preparation. Doctors send them in after having a meal of pancakes or something of that sort, they had had no preparation, probably the bowels moved two days ago, and expect the roentgenologist to show a kidney shadow, or expect him to demonstrate some little calcareous spot on his plates, which is impossible for him to do.

The technique is important, first in taking the films, and then not being afraid to use them. It is an expensive procedure, of course, but still the taking of eight or ten films if necessary will sometimes reveal a shadow that in the first three or four did not appear. Interpretation is of the utmost importance, but it takes a good deal of experience to read these shadows and to differentiate the shadow of the normal kidney from that of the diseased one. That question comes to the man who is doing x-ray work in large quantities, and the thing we must have is the close co-operation of the internist and of all the other men who are working for this diagnosis. We must get together and talk these things over. In fact, the x-ray laboratory should be the meeting place where all these men can get together and arrive at some positive conclusions.

DR. H. G. HAMER (Indianapolis): Doctor Bonn has called out attention to double ureterostomy for drainage in cases of bilateral renal tuberculosis. I have no doubt this procedure is of value in the handling of some of these cases. I am reminded of the practice for which Doctor Wishard has stood almost alone for many years, i. e., that of drainage of the tuberculous bladder by cystostomy. It is gratifying to see the way these patients improve after drainage has been instituted.

PROPHYLAXIS OF SYPHILIS WITH ARSPHENAMIN

LEO L. MICHEL and HERMAN H. GOODMAN, New York (*Journal A. M. A.*, Dec. 25, 1920), call attention to a method of preventing syphilis which they have found efficacious and which has not previously been described in the American literature. The injections of arsphenamin in small doses in persons who present no lesions, and who are definitely known to have been exposed to syphilitic infection, have in all cases resulted successfully in acting as a prophylactic measure. The prophylactic doses have averaged 0.3 gm. of arsphenamin, and the number and interval of the injections have varied with the time since first exposure. In no case has this been less than three doses. The time since exposure has little bearing on the result, but must be taken into consideration when the minutiæ of the procedure are under consideration. In two reported cases, a single injection has been held to be ample.

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EDITORIALS

ENCEPHALITIS

It is unfortunate that the epidemic incidence of any disease should lead to the inevitable publicity of the lay press. Such publicity results in the dissemination of inaccurate information, and not infrequently stampedes the laity into an unnecessary panic. The influenza epidemics of 1918 and 1919 afford excellent illustrations of this—and more recently the epidemic of encephalitis, though to a less marked degree.

The name by which the disease is popularly known is itself unfortunate in that "sleeping sickness" has long been the designation given trypanosomiasis, the African disease produced by the bite of the tse-tse fly. The latter is invariably fatal and its confusion in the lay mind with encephalitis (with a mortality of 20 percent) has naturally led to an unnatural dread of this disease.

Epidemic encephalitis (encephalitis lethargica) is not a new disease, but its markedly increased incidence in the past two years has aroused new interest in its study. It is known to be infectious, though the etiological factor is probably not always the same. It commonly is preceded by infections of the nose or throat, and probably is transmitted, though not readily, by nasal and oral secretions.

The onset is usually gradual, rarely abrupt, and is marked by increasing headache and somnolence, diplopia which is sometimes intermittent, and moderate increase in temperature.

The headache is ordinarily of moderate severity and has no characteristic localization. The somnolence is of varying degree and may reach the stage of coma. As a rule, however, the patient can be aroused sufficiently to answer questions. Marked double ptosis, contracted pupils with normal reactions, and mild strabismus are usually present. The eye grounds show no abnormality. The tongue is heavily coated and fissured. Speech is monotonous and blurred, apparently due to uncertain muscular control. Tremors, twitching of the muscles and athetoid movements may be present. Other neurological signs are ordinarily lacking, but when signs of meningeal irritation are present they are of bad omen. During the early stages there is commonly marked constipation and some retention of urine—later the evacuations may be involuntary.

The sensorium is clouded and the patient sleeps quietly as a rule. Restlessness and muttering delirium may be present during the early febrile stages. In the fulminant cases acute mania with extreme psychomotor activity have been reported.

The fever ranges from but little above normal to 104 degrees and falls in from four to seven days in the average case. The blood shows a moderate leucocytosis, with normal or increased polynuclears. The spinal fluid may be under some increased pressure and show a slightly increased cell count (lymphocytic). It is often entirely negative.

The diagnosis generally is made without difficulty—the combination of lethargy or somnolence, double ptosis, headache and diplopia being but rarely presented by any other condition. Tubercular meningitis, syphilitic meningoencephalitis, and botulism should however be borne in mind in making a differential diagnosis.

The prognosis is *not* particularly grave. It is said that 80 percent of the cases recover, and in this epidemic at least, this figure is probably too low rather than too high. Recovery is slow, particularly as regards the drowsiness, twitching and muscular weakness, but is usually complete. The average duration of the disease is from two to ten weeks.

Treatment consists solely of nursing and hygiene. No medicinal therapy has been suggested that is of any value.

PROFESSIONAL INCOME

To the professional man the problem of correctly making out an income tax return for the year 1920 is somewhat more involved than that presented to the salaried man. The wage earner on a fixed salary has an accurate estimate of the amount of compensation received for personal services, while the professional man's income varies from year to year. In the professional class may be included the physician, dentist, lawyer, architect, veterinarian, author and clergyman. Each must figure up his net income for the last year. If single or if married and not living with his wife and his net income was $1,000 or more, or if married and living with his wife and his net income was $2,000 or more, a return must be filed.

The exemptions are the same as for the year 1919, $1,000 for single persons and $2,000 for married persons living with husband or wife, and heads of families, plus $200 for each person dependent upon the taxpayer if such persons are

under 18 years of age, or incapable of self-support because mentally or physically defective. The period for filing returns is from January 1 to March 15, 1921.

The professional man must make a return of all fees, salaries and other compensation for services rendered, together with income from all other sources. If he keeps his accounts on the "receipts and disbursements" basis—which means a record of the amount received and the amount paid for expenses—he should file his income tax return for the year 1920 on that basis. If he keeps books showing income accrued and expenses incurred during the year, he must make his return from his books and include all income, even though not entered on his books. If books are kept on the accrual basis the taxpayer must include all income that accrued, even though not actually received, and may deduct items of expense, although not actually paid. Both the receipts and disbursement basis and the accrual basis are explained in instructions on the forms for filing individual returns of income.

This constitutes gross income from which the taxpayer is allowed certain deductions in arriving at net income upon which the tax is assessed. Among such deductions are the cost of supplies used by him in the practice of his profession, expenses paid in the operation and repair of an automobile used exclusively in making professional calls, dues to professional societies and subscriptions to professional journals, rent paid for office room, expense of fuel, light, water, telephone used in his office, and the hire of office assistants. Amounts expended for books, furniture and professional instruments and equipment of a permanent character are not allowable deductions. In the case of a professional man who maintains an office, but incidentally receives at his home patients, clients or other callers in connection with his professional work, no part of the rent of the home is deductible. If, however, he uses part of the house for his office, such portion of the rent as is properly attributable to such office is a deductible item.

A reasonable allowance is made for depreciation, or wear and tear of equipment and instruments used by professional men. When through some new invention or radical change in methods or similar circumstances, the usefulness in his profession of some or all of his instruments or other equipment is suddenly terminated, so that he discards such asset permanently from use, he may claim as a loss for that year the difference between the cost (reduced by reasonable adjustment for wear and tear it has undergone) and its junk or salvage value. If the apparatus was owned prior to March 1, 1913—the date the first income tax law became effective—its fair market value at that date should be considered instead of its cost in figuring depreciation and obsolescence.

Deductions for uncollectible fees form an important item in the returns of many professional men. To be allowed as a deduction, a debt must be worthless and must have been charged off within the year in which its worthlessness was discovered. The return must show evidence of the manner in which discovery was made. For example, statement should be made that the debtor has been discharged from bankruptcy or has disappeared leaving no trace, or that all ordinary means of collections have been exhausted.

A debt proved to be worthless is not always a proper deduction. Unpaid amounts representing fees for professional services are not allowed as deductions unless included as income in the return for the year in which the deduction is sought or in a previous year. The fact that expected income was not received does not reduce the taxable income. If a debt is forgiven it cannot be deducted, because it is then regarded as a gift. A debt may not be charged off or deducted in part, but must be wholly worthless before any part can be deducted.

Compensation in any form for professional services must be included as income. If a physician, lawyer, or other professional man should receive from a merchant goods in payment for professional services, the fair market value of such goods must be included as net income.

Forms for filing returns are now available at offices of collectors of internal revenue and branch offices. Collectors will mail to each person who last year filed a return a copy of the return form for 1920. Failure to receive a form, however, does not relieve a taxpayer of his obligation to file a return and pay the tax on time. Taxpayers whose net income for the year 1920 was $5,000 or less should use Form 1040A. Those whose net income was in excess of $5,000 should use Form 1040.

In addition to the individual forms, partnerships must file a return of income, or even if there was no net income, on Form 1065. Partnerships as such are not subject to the income tax. Individuals carrying on business in partnership, however, are taxable upon their distributive shares of the net income of such partnerships whether distributed or not and are required to include such shares in their individual returns. The return must show the name and address of each partner and his share of net income.

The tax this year as last may be paid in full at the time of filing the return—on or before March 15, 1921—or in four equal installments, due on or before March 15, June 15, September 15, and December 15. Payment may be made by

cash, money order or check, which should be made payable to "Collector of Internal Revenue". The return must be filed with the collector for the district in which the taxpayer lives or has his principal place of business. Heavy penalties are provided by the revenue act for failure to file a return and pay the tax within the time prescribed by law.

VALID OBJECTIONS TO THE CREATION OF A CHIROPRACTIC BOARD

In connection with the efforts now being put forth to secure a special licensing board for the chiropractors, the secretary to the Indiana State Board of Registration and Examination has sent to each member of the Indiana legislature a letter containing some very valid objections to the plan proposed by the chiropractors. In this letter the enactment of a law creating a new board composed exclusively of chiropractors, for the purpose of examining and licensing doctors who practice the healing art according to the chiropractic method, is considered unwarranted and unnecessary for the following reasons:

"First: because chiropractor doctors and all others who comply with the pre-medical and the medical educational requirements of the present law are now entitled to license,—see reports of 1919-1920 of State Board of Medical Registration and Examination. Uniformity in educational requirements is the essence of the law and a special board for the chiropractors would constitute class legislation.

"Second: The enactment of such a law will not only create another and unnecessary board, but will establish a precedent which will result in other healing sects, of which there are many, also demanding special concessions and boards of *their particular faith and kind.* I herewith quote that provision of the act which defines what shall constitute the practice of medicine within the meaning of the law: 'To open an office for such a purpose or to announce to the public in any way, a readiness to practice medicine in any county of the state, or to prescribe for, or to give surgical assistance to, or to heal, cure or relieve, or to attempt to heal, cure or relieve those suffering from injury or deformity, or disease of mind or body, or to advertise or to announce to the public in any manner a readiness or ability to heal, cure or relieve those who may be suffering from injury or deformity or disease of mind or body, shall be to engage in the practice of medicine within the meaning of the law.'

"The courts of this and other States have held that it is the *thing done,* and *not the name,* that constitutes the practice of medicine within the meaning of the law. Therefore what the chiropractor doctor does in conducting *his* business is the practice of medicine as defined by law. Hence the chiropractor doctors are admitted to licensure on the same terms and conditions as are other physicians except they are not required to take an examination in materia medica. The enactment of a law which confers an exclusive and special privilege for any single branch of the healing art on lower educational standards than is now provided for all schools of practice, is rank class legislation, discriminative and without justification."

MISGUIDED ZEAL FOR PUBLIC WELFARE

The American people are forced to be on guard constantly to prevent being duped by pseudo-reformers and social uplifters of various kinds who without any very logical reasons for their attitude are attacking the public treasury, the public morals, and even the personal rights of individuals. As a matter of fact we are being surfeited with propaganda concerning social reforms, many of which are sponsored by a lot of half-baked enthusiasts who are desirous of securing publicity for themselves, or of necessity must get rid of a little superfluous energy which nine times out of ten might be expended to better advantage in another direction. One of the latest paternalistic schemes up for consideration is that relating to the state control of maternity which is only another aid in the establishment of state medicine. Maternity benefits are unnecessary in the light of what is being done by medical educators, boards of health, child welfare societies, and many other organizations, together with the cooperation of physicians, in efforts to protect the life and health of the expectant mother and her offspring. Maternity benefits will not prove a panacea unless we get at the cause of our mortality and morbidity record in childbirth. In reality the mortality rate in childbirth in a large measure is due to our moral and social conditions. Bad habits, wrong living, and heredity have brought about physical defects which are giving many of the fatal results to childbirth. Immorality opens the gates to all kinds of imperfections in social conditions. When morality is lacking there is nothing to check the tendencies to follow fashion regardless of the effect on health. The tendency toward pleasure madness turns night into day, depriving future mothers of the fresh air, rest, and sleep which they so much need. The general health and powers of resistance are lowered and expectant mothers who have burned the candle at both ends are utterly unfit to bear children. State maternity benefits will not prevent deaths of expectant

mothers who have been made unfit by immorality, social excesses, or heredity. The members of the medical profession are opposed to socialized medicine, and should oppose this new form of compulsory insurance which is allied to those that have been offered for health, old age, sickness, etc.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

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We want THE JOURNAL to serve YOU.

How many doctors have written or telegraphed their senators and representatives concerning the necessity of defeating the chiropractic bill in the interest of the protection of the public from incompetents? Don't all speak at once!

EVERY reputable doctor in Indiana ought to support House Bill No. 267, by Kingsbury, which adds to the effectiveness of our Medical Practice Act and enables us to punish violators. Doctors who are asking that both the public and the medical profession be protected should get busy and see that the Kingsbury Bill has the proper support.

THE Lion Optical Company of Cincinnati is soliciting business from Indiana physicians. For the benefit of the members of the Indiana State Medical Association we desire to say that this company sells and recommends a number of proprietary eye remedies, the virtues of which depend largely upon printer's ink. A reputable optical concern soliciting business from reputable physicians will steer clear of trade in remedies that have any semblance of being humbugs.

THE bill before the present Indiana legislature providing for a physicians' registration fee is worthy of support. An annual registration fee will enable the Board of Medical Registration and Examination to keep track of the doctors who are practicing in Indiana and know what they are doing, and it also will furnish much needed funds for the prosecution of offenders. There should be no opposition to this bill on the part of the members of the medical profession.

AGAIN it is time to pay income tax, and doctors are no better than anyone else when Uncle Sam makes his demands. It would be well for doctors, who generally are noted as being procrastinators, to know that a heavy penalty is attached for non-payment of income tax on or before March 15. It also would be well for every doctor to know that the income tax applies to profit received from any source, whether in the form of gifts, salaries, or returns from services of any kind.

IN several counties of the State the doctors, while technically members of a county medical society, are not holding meetings, and in one or two counties have not even gone through the formality of selecting representatives to handle their dues and perform duties that make them eligible for membership in the State Association. There is room for some active work on the part of councilors or others who can stir up a little enthusiasm and get the apathetic doctors working in a medical society that exists in something more than a name.

IT would be a fine commentary on the fairness of doctors if we sanctioned the bill before the legislature which creates a Board of Examination and Registration for Nurses to be composed of three doctors and two nurses. How would we like to have nurses on the Medical Board for the purpose of passing judgment on our fitness to practice medicine? In reality there was no occasion for the introduction of any such bill in the present legislature, and we hope that the movement to upset the present law governing the registration of nurses will be side-tracked.

THE Indiana legislature is in session and as we go to press the chiropractic bill is up for action in the House. As usual only a few members of the Indiana State Medical Association are taking enough interest in medical legislation, and the protection of the public from medical imposters, to use their influence among legislators to prevent the legalizing of the chiropractic sect. There are hundreds of doctors who howl when unfavorable medical legislation is passed, but those who howl the loudest are the very ones who do the least toward promoting wise and beneficent laws.

WE are heartily ashamed of those Indiana doctors who are opposed to paying the insignificant sum of two dollars as an annual registration fee in order that the Board of Medical Registration and Examination may have a dependable record of those holding licenses and keep track of physicians as they change from place to place. The small sum asked annually for registration will make a fund sufficient to enable the Board to enforce the Medical Practice Act. Fortunately there are only a few physicians who are opposed to the measure, and in all probability those physicians are the ones who complain the most because our medical practice law is not enforced or because we have no better means of keeping track of quacks and itinerant doctors.

AGAIN the Indiana legislature is called upon to pass judgment upon a bill which would give the druggists a monopoly on drugs and actually prohibit doctors from dispensing drugs in any form. It is needless to say that Indiana's sick, especially in country districts, would pay the penalty if doctors were prohibited from dispensing drugs and the sick were compelled to wait upon the pleasure of some pharmacist—perhaps miles distant—before receiving the medicine prescribed by the doctor to relieve suffering or combat the ravages of disease. We do not believe that the better class of druggists are in favor of any such vicious legislation, and certainly the manufacturers, who profit through the patronage of doctors, ought to help in the defeat of the bill.

"LET George do it" is the attitude of the majority of Indiana doctors who are now silent and indifferent concerning the chiropractic bill now before the legislature, and it remains for our invaluable chairman of the Legislative Committee of the Indiana State Medical Association, Dr. W. N. Wishard, of Indianapolis, and two or three other enterprising medical men who have the interest of the profession and public at heart, to take the responsibility of fighting the chiropractic bill among legislators who really have to be shown the iniquity of the chiropractic bill in order to vote intelligently. Of course we expect a few men to do all the work, but we really feel that more might show a little interest by either writing or wiring their sentiments to senators and representatives.

THE United States Public Health Service is warning consumptives to stay away from the semi-arid west where the hospitals are filled to overflowing, where even ordinary housing accommodations are largely unobtainable, and where proper care is impossible. As a matter of fact, it is time for physicians as well as the public to know that climate in itself does not form a necessary part in the successful treatment of tuberculosis. There are any number of sanatoria and tuberculosis camps under both private and public control, located in various sections of the central states and not a few right here in Indiana, which afford the consumptive not only appropriate treatment and care but as good a chance of recovery as may be found in any of the western resorts for the tuberculous.

INDIANA physicians recently have been flooded with letters and literature from the "T. J. Glover Research Laboratory, Toronto, Canada," heralding "Glover's Cancer Serum," and advising that this serum is now obtainable at the address given, price five dollars per treatment, with directions for treatment with each order. Upon inquiry it is learned that these "treatments" are still in the experimental stage, and the reported results have not been corroborated by independent investigators. The Academy of Medicine of Toronto has appointed a committee to investigate the claims made for this "cancer serum", but as yet no report has been made by them. Physicians are cautioned to pay no attention to this "remedy" until its claims are proven, and especially in view of the fact that the literature conveys the impression that the Glover Research Laboratory had received a permit from the United States Public Health Service licensing the interstate sale of this serum in the United States, whereas no such license has been issued.

WE hear much about avoiding union methods in the conduct of our profession, but we note that strikes among the doctors of several countries of Europe are getting rather frequent. These strikes are largely brought about through the effect of state medicine or various benefit associations that have been successful in fixing a very low standard of fees for medical and surgical services. Recently 4,000 doctors of Vienna, who have been treating patients under the auspices of sick benefit associations, have gone on a strike and are refusing to make visits upon the sick except at the regular fees obtained in private practice. In England there have been strikes among members of the medical profession who have objected to the low scale of fees fixed by state enactment or industrial regulation. In fact regulation of fees in some of the foreign countries has reached that point where the average medical man comes very close to starving

if he depends upon such fees. What is occurring in Europe is bound to occur in this country unless we get away from the idea of not considering the practice of medicine a vocation and all who engage in it willing to devote time and talents without hope of adequate reward. If we are going to get into this regulation business we should regulate every vocation and not apply it to the members of the medical profession alone.

EVERY prominent medical society, especially if it has a regular place of meeting, possesses a stereopticon and epidiascope as a part of its equipment for illustrating papers and elucidating medical lectures. To this equipment must now be added a moving picture machine, and the Federal Government, through the Surgeon General's office and the Public Health Service, will furnish a large number of motion picture films which have been prepared for instruction purposes. The latest film from the United States Public Health Service vividly presents the life history of the mosquito, especially the kind that transmits malaria germs. The views show how the female mosquito absorbs the malaria germs with the blood of the malaria patient, how the germs increase and multiply, and pervade the salivary glands of the mosquito, and how the mosquito passes them on to the next innocent bystander, who promptly falls ill with the disease.

WE note that some of the county medical societies are suspending members for non-attendance at meetings and unethical advertising. We quite agree with what one of the secretaries says, that "if the medical profession is to retain the respect of the public it must keep itself respectably clean." It is all right to talk about 100 percent membership, but isn't it better to have as members of a county medical society only doctors who are a credit to the society and bar those who are a source of humiliation and perhaps disgrace? It is a comparatively easy thing to secure members. As a general thing the more objectionable doctors are the very ones who like to be in good company, but why admit such men in the first place? We heartily commend the action of some societies that have had the nerve to suspend from membership those doctors who are not only guilty of non-attendance at meetings—which in itself shows lack of interest—but also are guilty of unprofessional conduct.

THE work of the Medical Defense Committee has been reorganized, owing to the resignation of Mr. F. E. Schortemeier, attorney. From now on all communications concerning Medical Defense will be sent to Dr. Charles N. Combs, Secretary, Terre Haute, Indiana. The Committee has secured the services of our former attorney, Mr. A. G. Cavins, of Indianapolis, who will be the general counsel. In case of a malpractice suit, the member will be allowed to choose his own local attorney, who will actively manage the defense of the case. Mr. Cavins will act in an advisory capacity, and will prepare the brief in case of an appeal. Subject to the approval of the Medical Defense Committee, the Association will pay the local attorney's fees in connection with the defense, or, if the member is already insured in a medical defense insurance company, this Association will pay one-half of the expense. No member will be defended until he has notified Dr. Combs and has properly completed the application blank, which will be furnished by Dr. Combs. This will include a recommendation of the case by the officers of the local medical society.

ACCORDING to the Medical Practice Act each and every one of the chiropractors who are attempting to cure or relieve the sick and suffering of Indiana are subject to prosecution for practicing medicine without a license. Just why chiropractors have escaped punishment for infraction of the laws of Indiana is a little difficult to understand except on the theory that prosecuting attorneys as a result of political or other reasons have found it convenient to avoid prosecutions. However, when the lives of innocent children and the public welfare are seriously jeopardized, as in the instances occurring in Fort Wayne where chiropractors were treating smallpox cases and diphtheria, in both instances the disease not being reported to the health department, and in the case of diphtheria the patient dying while under the chiropractor's care, it would seem that prosecution is necessary in order to determine whether or not the people of Indiana are to be protected and whether or not Indiana laws are effective.

AN anti-vivisection bill has been introduced into the present Indiana legislature, and aside from the usual viciousness of such measures, whenever and wherever introduced, the one that is before the Indiana legislature at the present time contains an unusual "stinger" which would make it possible to prosecute many doctors for ordinary operative work upon their patients. It probably is another case of "giving a calf enough rope and he will hang himself," but aside from all that, the members of the medical profession should see to it that the anti-vivisection bill dies in the committee, or, if it is

reported out, it should be defeated in the interest of scientific progress and the benefit of humanity. It is the height of nonsense to place a higher value upon the lives of a few guinea pigs and rats than upon the lives of human beings, and especially children who perhaps have received the greatest benefit from research work which has developed the most important curative advancements in medicine as a direct result of animal experimentation. Furthermore, the greatest advances in veterinary science, with the resulting protection to live stock, have come about through the results of animal experimentation; so that aside from the humanitarian view of the question there is the economic consideration in the protection of cattle and hogs, which oftentimes outweigh any economic consideration of human beings.

THE State of Colorado for some time has had a law whereby any physician in the state could secure a pass on any railroad in the state by simply asking for same, but when a pass was accepted by a physician he automatically became an employee of the railroad company and could be called upon to render service to any case, whether sickness or injury, connected with the railroad company. Furthermore, being in the employ of the railroad, he could not give testimony against the company in any accident or injury case. Some representative in the present Colorado legislature has awakened to the injustice of such a law and has introduced a bill against such practice. In Indiana doctors do not get passes that easy, but they do manage to get passes on the railroads which generally are considered handsome remuneration for many thousands of dollars worth of service rendered the railroad companies, and there seems to be no end to the doctors in Indiana who fall into that sort of trap. What every doctor ought to appreciate is the fact that his services are worth just as much to a railroad company as they are to an individual, and the charges should be similar. Furthermore, every doctor ought to advise railroad companies that he is able and expects to pay the usual charges for any service he receives from the railroad company, but that he also shall expect the railroad company to pay him his usual fees for any services rendered them.

INCREASING migration to the cities and towns seems to be affecting members of the medical profession the same as those following other vocations, and this is shown by the growing scarcity of doctors in country districts. In fact there are several small towns in good farming districts in Indiana, formerly supporting two to five doctors, that now are without doctors of any kind whatsoever, and the residents of those districts are sending out S. O. S. calls for doctors. Can it be that all of the young doctors have such a desire to be in touch with the advantages of city life that they are willing to put up with less income rather than live in small towns and villages where they are sure of comforts and a good income! It reminds us of the saying of a struggling doctor in New York City who said that he would rather starve in New York City than live on the fat of the land in any of the small cities of the Middle West. However, everyone to his taste, as the old lady said when she kissed the cow, but we desire to remind some of the young men who are just getting out of medical colleges that they make a great mistake if they overlook some of the rich and populous country districts in selecting a place to practice medicine. One should not feel compelled to stick to the job day and night, year in and year out, and an occasional visit to the cities, and the pleasure afforded by frequent contacts with the outside world, would be quite sufficient to vary what some might consider the monotony of small-town life even though such life prove economically profitable.

IN a recent number of THE JOURNAL we commented on the "slaughter" of tonsils and thyroids, with a suggestion that a little more study of these individual cases might result in a more rational therapy. A correspondent reminds us that we also ought to condemn the "slaughter" of the teeth, for it is perfectly shocking how frequently we find very young people wearing full sets of artificial teeth, both above and below, the natural teeth having been sacrificed on the altar of perhaps misguided judgment on the part of some dentist who has gone to extremes concerning absorption of infection from dental pathology. The frequency with which dentists recommend extraction of all of the teeth in young people seems criminal, and it may be seriously doubted if in a single one of such instances there is any justification for such radical procedures. Nowadays every dentist owns an x-ray outfit, and he glibly talks about infected foci about teeth as depicted by the x-ray plate, when as a matter of fact it may be doubted if he knows how to interpret an x-ray plate, to say nothing of judging whether or not the interpretation points to the necessity for such radical measures as the withdrawal of the offending teeth. We do not doubt the urgent necessity of removing foci of infection in the mouth, whether it be tonsils, or teeth, but we do question the propriety of sacrificing so many teeth as we frequently find to be the case in comparatively

young people who all their lives have been reasonably thorough in their attention to sanitation of the mouth and who have given little evidence of disease in and about the teeth though perhaps suffering from some constitutional disturbance that indicated foci of infection somewhere. It really seems that there is room for very great improvement in the therapy of the average dentist, and it is hoped that very soon the question of extraction of the teeth will be on a more rational basis.

SOME of the venereal clinics under state and federal control are not deserving of the support of the medical profession for the reason that they are not fulfilling the mission for which they were established. The venereal clinics were created for the purpose of giving appropriate treatment to those afflicted with venereal diseases but who have no funds for obtaining the necessary medical attention. However, in many instances this service is being taken advantage of by classes of people who are amply able to pay for the attention given, and they are receiving neosalvarsan injections and other treatment at the venereal clinics free of charge. Such a condition of affairs is unethical and unfair, not only to the medical profession but to the people who are being pauperized and who are wrongfully getting the impression that they should have something for nothing—that the world owes them a living—and thus adding to a sentiment which already has begun to undermine our Government and cause an unrest which is threatening the Nation. There is no question but that the venereal clinics are a good thing if conducted properly, but unless they are placed under social service control and every case presented for treatment investigated and barred from free service if found to be able to pay for the treatment required, they are not fulfilling their mission and are working an injustice to the public as well as to the medical profession. If the clinics are to be continued on the present basis, then doctors should not be asked to support them and to pay taxes for their upkeep. The venereal clinic is only another entering wedge tending to the socializing of medicine and the medical profession will only injure itself by giving support to a venture of such questionable sociological value and so harmful economically for so many of the patients themselves as well as for the medical man.

THE chiropractors seem to be proving up their incompetency and demonstrating the folly of legally recognizing them as worthy of the confidence of the public in the treatment of the sick, as evidenced by some recent episodes in Fort Wayne where chiropractors not only failed to recognize smallpox but were found guilty of aiding in the spread of the contagion; and still later, when other chiropractors were found guilty of not only treating diphtheria without recognizing the disease and reporting it to the health authorities, but being charged with being indirectly responsible for the death of the patient as well as the spread of the contagion. In the case of the death from diphtheria, the attending chiropractor admitted being employed during the day by the General Electric Works and is a chiropractor on the side, and did not hesitate to assume charge of a case of diphtheria, which disease of course was not recognized by him and the seriousness of which was not recognized until after the death of the child.

The smallpox and diphtheria episodes to which we have referred are the strongest possible arguments that can be offered in opposition to the effort on the part of chiropractors to secure legal recognition for the treatment of the sick and suffering in Indiana. The chiropractors as a class are ignorant pretenders who, without either general or special education, and with no training or experience in the recognition of diseased conditions, are asking for the privilege of practicing medicine. It is the height of absurdity to consider these men as worthy of recognition, and the protection of the public demands that they be prevented from imposing upon the people. They should be told and told very emphatically that if they want to practice medicine in Indiana they must comply with the present standards, which are none too exacting.

HOUSE BILL No. 20, introduced by Representative Kamman, proposes the creation of a new Board for the examination and registration of trained nurses, three of the five members of this Board to be physicians. This Bill has not the official approval of the Indiana State Medical Association, as explained in a letter sent out by the Committee on Public Policy and Legislation of the Indiana State Medical Association, and the following objections are given:

(1) There is no occasion for such a bill, as there already is a state Board for the purpose of registering and licensing nurses and the Board properly is composed of nurses.

(2) House Bill No. 20 proposes that three of the five members of the Board provided for in this Bill shall be physicians. This is manifestly for the purpose of turning the control of the Nurses' Board to that of the medical profession, and is wholly undesirable. If the nurses were to ask for a representative on the State Medical Board it would undoubtedly arouse the opposition of every physician in Indiana. Physicians have no right to be on the Nurses' Board.

Not one of them has taken a course in nursing, and very few, if any, could pass an examination in it. It is a separate, although allied, profession requiring separate and special educational training.

(3) . The Bill is loosely drawn and poorly phrased.

(4) It lowers the standard of professional nursing. Its educational defects are so apparent that your committee's reading of the Bill will sufficiently disclose them without taking your time to discuss them in detail.

(5) It would abolish the Board composed wholly of nurses.

(6) It would be a serious detriment to all the larger hospitals in Indiana.

(7) There is nothing of merit in the Bill which cannot be obtained through reasonable and proper presentation of the facts to the present Board. This latter fact would have been pointed out to the proponents of the House Bill No. 20 if they had permitted its consideration by the Committee on Public Policy and Legislation of the Indiana State Medical Association.

DEATHS

JOHN F. BRYDON, M.D., Griffin, aged 77, died December 12.

HIRAM P. NEYMAN, M.D., died recently at his home in Saltillo.

CHARLES E. DUNN, M.D., Shelbyville, died December 16, aged 57.

LAWRENCE D. WILSON, M.D., Gary, died December 22, aged 64 years.

MRS. ELIZA DRAKE, aged 80, widow of Dr. T. G. Drake, died recently at Prairieton.

CHARLES V. LEEDY, M.D., Andrews, died December 22, aged 52 years. He was graduated from the Baltimore Medical College in 1896.

WILBUR B. MORRIS, M.D., died recently at his home in Chalmers. He was graduated from the University of Louisville Medical Department in 1898.

HIRAM VARD WHITING, M.D., Mt. Vernon, died recently, aged 45 years. He was graduated from the University of Louisville, Medical Department, in 1898.

WILLIAM N. HORNE, M.D., died December 21 at his home in Anderson at the age of 68 years. He was graduated from the Medical College of Ohio, Cincinnati, in 1877.

GEORGE P. RAMSEY, M.D., Crawfordsville, died recently at the age of 44 years. He was graduated from the Central College of Physicians and Surgeons in 1900.

DANIEL JEFFERSON BALLARD, M.D., died January 9 at his home in St. Paul, aged 79 years. He was graduated from the Cincinnati College of Medicine and Surgery in 1876.

MRS. CATHERINE RODMAN, widow of the late Dr. William Martin Rodman, formerly of Brownstown and recently of Indianapolis, died recently at her home in Indianapolis.

NOBLE WINFIELD SCOTT, M.D., died recently at his home in Huntington, aged 81 years. He was graduated from the Cincinnati College of Medicine and Surgery in 1866 and was a member of the Huntington County Medical Society and the Indiana State Medical Association.

GEORGE W. BROWN, M.D., died December 16 at his home in Frankfort, aged 77 years. He was graduated from the Rush Medical College, Chicago, in 1866, and was a member of the Clinton County Medical Society, and the Indiana State Medical Association. Dr. Brown was a veteran of the Civil War.

JOHN W. COOK, M.D., Pendleton, died January 1, aged 68 years. Death was due to the effects of paralysis. Dr. Cook was graduated from the University of Louisville Medical Department in 1879 and was a member of the Madison County Medical Society, the Indiana State Medical Association, and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. R. C. KENNEDY is spending several weeks in Vero, Fla.

DR. CHARLES F. MORRIS has been appointed city chemist of Anderson to succeed Dr. Roush.

DR. H. H. SHOOK, Cincinnati, and Miss Esther M. Hiner, Butler, were married December 31.

DR. J. Y. MCCULLOUGH has recently been appointed physician for the Floyd County jail and asylum.

DR. DON C. MCCLELLAND has been appointed coroner of Tippecanoe County to succeed Dr. W. F. McBride.

DR. H. S. MCKEE has removed from New Point to Greensburg for the continuance of his practice of medicine.

DR. EVERETT AIKMAN has been appointed county physician to Montgomery County to succeed Dr. A. A. Swope.

DR. FRANK E. RAY, Shelbyville, has been appointed county coroner for Shelby County to succeed Dr. B. G. Keeney.

DR. C. E. LINTON of Medaryville has been appointed county coroner for Pulaski County to succeed Dr. R. J. Ives of Francesville.

ACCORDING to newspaper report all but one of the doctors in Lawrence County have been fined for failure to report births promptly.

THE regular monthly meeting and dinner of the Madison County Medical Society was held January 12 at the Y. M. C. A. home, Anderson.

DR. GEORGE F. KEIPER, Lafayette, suffered considerable loss when his car was burned in a fire in the garage in which the car had been left.

PROFESSOR C-E A. WINSLOW, of Yale University, has been chosen to direct public health work of the League of Red Cross Societies in Europe.

DR. CHARLES B. COMPTON has located in Frankfort for the practice of medicine, where he has become associated with Dr. W. L. Hammersley.

ON January 1 the first "Osteopathic Hospital" in Indiana was opened at Indianapolis by M. E. Clark and C. B. Blakeslee, osteopaths of that city.

DR. ELMER SINGER and Miss Helen Ault, both of Fort Wayne, were married at the Plymouth Congregational Church, Fort Wayne, on January 25.

THE annual meeting of the Kosciusko Medical Society was held at the Hotel Hays, Warsaw, December 28. The meeting was well attended and a fine program enjoyed.

DR. CLAUDE F. FLEMING, who has been practicing medicine in Elkhart for the past fifteen years, has removed to Chicago to take up special training in genito-urinary diseases.

THE regular meeting of the Wells County Medical Society was held in Bluffton, December 21. A fine scientific program was enjoyed, followed by a luncheon and social hour.

DR. MERRIL F. STEELE, Indianapolis, has been appointed superintendent of the Hope Methodist Hospital of Fort Wayne, a branch of the Methodist Episcopal Hospital in Indianapolis.

A WISCONSIN brewery has asked permission to make beer for medicinal purposes, as announced by the prohibition director of Milwaukee. The request was refused tentatively.

ACCORDING to newspaper report a hiccoughing epidemic which first struck Paris is now in evidence in New York and probably will extend to the west in due time. Doctors term the malady nervous flu.

A MEMORIAL tablet to the memory of Major Paul B. Coble, the only Indianapolis physician to give his life in the World War, was unveiled at the Indiana University Medical School building on January 13.

THE board of directors of the proposed Cass County Hospital will call for a $100,000 bond issue to raise funds for the erection of the hospital. The work on the building will probably be started in the spring.

THIRTY members of the Huntington County Medical Society and their wives were entertained at a banquet on January 4 in the Commercial Club rooms. This was the first meeting of the year and there was an exceptionally good program.

THE Winamac Hospital was destroyed by fire on January 4. Three patients were in the hospital at the time and all were taken out without injury. The loss is estimated at about $15,000. The institution was the property of Drs. George and Clem Campbell.

THE annual election of the Miami County Medical Society was held December 31 with the following result: President, Dr. George Van

Mater; vice-president, Dr. Homer Hass; secretary-treasurer, Dr. M. A. McDowell; censor, Dr. Newel of Converse.

WORK will start soon at the Indiana Village for Epileptics at Newcastle on additional buildings for women, according to a statement by Amos W. Butler, secretary of the State Board of Charities. The village as it is now equipped can care for only men and boys.

DR. JOHN D. DONOVAN, who died recently at his home in Lovington, Illinois, had the unique distinction of being the father of ten children, eight of whom adopted the same profession as their father. It is believed that the United States contains no parallel case.

THE Dubois County Medical Society met in Jasper, January 18, and elected the following officers: President, O. A. Bigham; vice-president, L. A. Salb; secretary-treasurer, W. D. Bretz. The meetings are to be discontinued until the roads are in better shape.

ONE hundred percent more licenses were granted to doctors in the State of Indiana in 1920 than in 1919, according to the records of the State Board of Medical Registration and Examination. The report shows that 167 physicians were licensed during 1920 and only 71 during 1919.

THE Goshen Medical Society in recent meeting elected officers for the new year as follows: Dr. Irvin J. Becknell, president; Dr. D. L. Miller, vice-president; Dr. Harry E. Vander Bogart, secretary; Dr. E. E. Ash, treasurer; Dr. C. Yoder, librarian; Dr. M. K. Kreider a member of the board of censors.

DR. EDOUARD J. DUBOIS, city bacteriologist for Indianapolis, has recently tendered his resignation to the secretary to the board of public health. Dr. DuBois has accepted a commission as Major in the United States Public Health Service. The resignation is to become effective as soon as the board can release Dr. DuBois.

AT a meeting of the State Board of Medical Registration and Examination held at the Claypool Hotel, Indianapolis, January 14, the following officers were elected: W. A. Spurgeon, Muncie, president; E. M. Shanklin, Hammond, vice-president; W. T. Gott, Crawfordsville, secretary; Paul R. Tindall, Greensburg, treasurer.

AN ordinance of San Antonio, Texas, which provides that the city board of health may require the vaccination against smallpox of pupils, teachers, and school employees, has been held valid by the Court of Civil Appeals of Texas. The court decided that vaccination could be required even though no epidemic of smallpox existed.

THE report of the division of infant and child hygiene of the Indiana State Board of Health shows that 1,498 children were examined in the first year of the department's operation as a separate division of the board of health. The division has carried on a wonderful work, but more funds must be forthcoming if the work is to be continued.

AT the annual meeting of the Public Health Nursing Association, held January 13 in Indianapolis, the following officers were elected: President, Mrs. Henry B. Heywood; second vice-president, Mrs. R. C. Green; corresponding secretary, Mrs. W. H. Insley; assistant treasurer, Mrs. George C. Hitt. Other officers were held over from last year.

THE Schneck Memorial Hospital, Seymour, received a Christmas gift in the form of the property adjoining the hospital on the east side. The building is to be remodeled and equipped for the home of the nurses. The nurses have formerly occupied rooms in the hospital, and their moving will greatly relieve the congested condition in the hospital.

REAR ADMIRAL EDWARD RHODES STITT, commanding officer of the United States navy medical school since 1916, has been appointed surgeon general of the navy to succeed Rear Admiral W. C. Braisted, who retires after serving in this position for eight years. Admiral Stitt is best known to the medical profession as an authority on tropical diseases.

THE Warrick County Medical Society met January 5 and elected the following officers: President, Dr. N. M. Spradley; vice-president, E. L. Youngblood; secretary-treasurer, Dr. W. P. Ford; censors, Drs. P. E. Wilson, J. G. Hoover and William H. Mills. Dr. Samples was elected as delegate to the State Medical Association and Dr. W. W. Rhudy as alternate.

Two pavilions for adult patients and a building for children at Sunnyside are needed immediately, according to report of the institutional construction expert of the National Tuberculosis Association. Buildings of the pavilion type for ambulant and semi-ambulant patients are needed. Two pavilions, one for women and the other for men, and a building for children should be erected at once.

ONE of the most promising movements inaugurated by any American city for an intensive educational attack on cancer was that formed in the city of Cincinnati on November 4, 1920. This organization, known as the Divisional Council on Cancer Control, was launched under the joint auspices of the City Health Department, the Academy of Medicine, and the Public Health Federation, and is financed by the Council of Social Agencies of the Federation.

ALL the hospitals and contract hospitals of the U. S. Public Health Service in the semi-arid southwest are already crowded with tuberculosis patients and the Public Health Service has been forced to transfer patients from Tucson, Ariz., and other western hospitals to sanatoriums near Asheville, N. C., and elsewhere. Surgeon General Cumming again renews his warning against tuberculosis patients leaving sections where the government is able and willing to care for them and going to the southwest on their own initiative.

BEGINNING February 8th a course in phychiatry, neurology and neuropathology was started under the direction of Drs. Bahr, Neu, and Humes, with clinics and lectures given at the pathological department of the Central Indiana Hospital for the Insane. The lectures and clinics are held every Tuesday at 1:30 p. m. There is also a course of lectures and clinics in psychopathology being given at the pathological department of the Central Indiana Hospital for the Insane on every Saturday at 2:00 p. m., by Dr. Max Bahr.

DR. HENRY S. HOUGHTON has been appointed director of the Peking Union Medical College. Dr. Houghton, a graduate of the Ohio State University and of the Johns Hopkins Medical School, has spent the greater part of the past fifteen years in China, where he has served as physician of the WuHu General Hospital, as Dean and Professor of Tropical Medicine of the Harvard Medical School of China in Shanghai, and recently as a member of the staff of the China Medical Board and Peking Union Medical College in Peking.

THE annual election of officers of the Indianapolis Medical Society was held January 5 and new officers elected as follows: Dr. A. L. Wilson, president; Dr. H. G. Hamer, first vice-president; Dr. Charles D. Humes, second vice-president; Dr. Leslie H. Maxwell, secretary-treasurer (re-elected). Drs. C. E. Cunningham and John Pfaff were elected members of the judicial council. Delegates to the meeting of the Indiana State Medical Society, which will be held next September, are Drs. L. D. Carter, Alfred Henry and W. D. Hoskins. Alternates are Drs. Bernhard Erdman, Ralph Chapell, J. Don Miller and Frank E. Abbett.

THE United States Civil Service Commission announces an open competitive examination for biologist. Two vacancies in the Hygienic Laboratory, Public Health Service, Washington, D. C., at $2,500 to $3,000 a year and similar vacancies will be filled from these examinations. All citizens of the United States who meet the requirements are eligible. The duties of appointees will consist of research work in the elaboration of drugs for the treatment of tuberculosis. Applicants should apply at once for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C., as examinations and receipt of applications close March 15, 1921.

DURING January the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Calco Chemical Co.:
Cinchophen Tablets.

Hynson, Westcott & Dunning:
Globules of Benzyl Benzoate.

Heyl Laboratories:
Acriflavine,
Proflavine.

Intra Products Co.:
Calcium Cacodylate—IPCO.

Winthrop Chemical Co.:
Salophen.

Morgenstern & Co.:
Salophen.

MEMBERS of the Cincinnati (Ohio) Health Board and its officials, including the health commissioner, assistant health commissioner and the mayor of the city, have been made defendants in an action for $25,000 damages filed by a local resident on the ground that his twelve-year-old son was subjected improperly to a physical examination. The petition states that

the district physician at the school where the boy attends, under authority of the board of health, compelled him to submit to a physical examination and "publicly told the child, in the presence of eight other pupils," that he was suffering from "enlarged tonsils". It is alleged this was communicated to the father in an unsealed envelope, and that the child's name was published on a chart in the school as "an underweight," and that as a result of other pupils knowing these things the boy has been shunned by his former playmates and is humiliated by being dubbed "underweight" and denied the privilege of entering their games.

THE hotel headquarters for the annual session of the American Medical Association to be held in Boston, June 6-10, 1921, as reported by the Local Committee on Arrangements and published in *The Journal of the A. M. A.*, January 1, 1921, are as follows:

SECTIONS	HEADQUARTERS
Practice of Medicine	Hotel Somerset
Surgery, General and Abdominal	Hotel Lenox
Obstetrics, Gynecology and Abdominal Surgery	Hotel Touraine
Ophthalmology	Hotel Vendome
Laryngology, Otology and Rhinology	Hotel Brunswick
Diseases of Children	Parker House
Pharmacology and Therapeutics	
Pathology and Physiology	Hotel Bellevue, Copley Square Hotel
Stomatology	Parker House
Nervous and Mental Diseases	Young's Hotel
Dermatology and Syphilology	Copley Square Hotel
Preventive Medicine and Public Health	Hotel Bellevue
Urology	Hotel Westminister
Orthopedic Surgery	Adams House
Gastro-Enterology and Proctology	Hotel Essex

The Committee on Hotels, of which Dr. John T. Bottomley is chairman and Dr. Stephen Rushmore is secretary, requests that those who desire to secure hotel reservations shall write to the committee. The section in which the applicant is especially interested, the number in the party and when it is planned to arrive in Boston should be stated. Address communications to one of the officers at the Boston Medical Library, 8 The Fenway.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	83
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	12
4.	Carroll	Eva N. Kennedy	20	22
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	24
8.	White	H. B. Gable	10	'11

INDIANA STATE MEDICAL ASSOCIATION
Secretary's Report

To the Council:

After reporting a decline in membership for the past two years, it is gratifying to be able to present a gain in members for the year 1920. The indications are that our equilibrium will be fully established in 1921, and we will regain our pre-war standing.

Membership Jan. 1, 1920			2,459
Died	31		
Removed	27		
Retired	6		
Delinquent	194	258	2,201
New members			312
Membership Jan. 1, 1921			2,513

The gain this year is due to the activities of the 100 Per Cent Club, of which forty-four counties out of a possible eighty-nine were entitled to membership. Of these forty-four, thirty-five counties showed more than 100 percent of their last year's membership.

The following counties enrolled more members this year than any time since 1910; namely, Clinton, 28; Delaware-Blackford, 74; Fayette, 18; Marion, 366; Monroe, 24; St. Joseph, 75; Tippecanoe, 62, and Vigo, 98.

For this coming year, we will have a very modest slogan—"10 percent gain in membership"—although I would like to make it "Our goal, 3,000 members". If we achieve this 10 percent increase, our membership will be a little over 2,700, which is just enough to make it over the previous top notch of 2,669 members in 1917.

Respectfully submitted,
CHARLES N. COMBS, Secretary.

THE COUNCIL

The regular mid-winter meeting of the Council of the Indiana State Medical Association was held January 20, 1921, in the Assembly Room of the Board of Trade Building, Indianapolis, 11:00 a. m., with the following members present:

Dr. Walter Leach, Third District; Dr. A. G. Osterman, Fourth District; Dr. Spencer M. Rice, Fifth District; Dr. F. J. Spilman, Sixth District; Dr. S. E. Earp, Seventh District; Dr. E. M. Conrad, Eighth District; Dr. Wm. R. Moffitt, Ninth District; Dr. E. M. Shanklin, Tenth District; Dr. E. E. Morgan, Twelfth District; Dr. David Ross, President; Dr. A. E. Bulson, Jr., Editor of THE JOURNAL; Dr. Charles N. Combs, Secretary; Dr. Frank B. Wynn, Chairman of the Committee on Medical Defense; Dr. W. N. Wishard, Chairman of the Committee on Legislation, and Mr. F. E. Raschig.

Reading of the minutes of the last meeting, which were approved.

Dr. E. M. Shanklin, of Hammond, was elected chairman of the Council, succeeding Dr. G. W. H. Kemper, resigned.

The secretary-treasurer made his annual report covering the membership and the finances of the general fund and of the medical defense fund, which was accepted.

Dr. Bulson gave his annual report concerning THE JOURNAL, stating that since the South Bend session he had made his contracts for this year for the printing of THE JOURNAL, and found that the cost of

paper had so increased that $1.50 would not be sufficient to cover the expense of publication. He asked for $2.00 per member, which the Council readily granted, having knowledge that other state societies were paying three, four and even five dollars per year for their state journals. We are able to make a very large saving in comparison to other associations by reason of the fact that we do not pay our editor a salary comparable to the salary paid editors of many other state journals. Dr. Bulson was again tendered a vote of thanks from the Council for his most excellent Journal and his invaluable services as editor and manager.

The councilors present made their detailed reports concerning their respective districts.

The question of a few very weak societies in the State was discussed, and it was thought best to continue a plan which had previously been invoked in stabilizing these societies. We already have three hyphenated county societies, and, on motion carried, the Council recommended the formation of the following additional joint societies: Floyd-Clark, Pulaski-Starke, Fayette-Franklin. The secretary was instructed to arrange with the officials of these counties to perfect the amalgamation.

Dr. W. N. Wishard spoke concerning the situation in the Legislature now in session. In accordance with instructions previously received, he had employed Mr. F. E. Raschig as assistant during January and February, and the Council voted Mr. Raschig a salary of $300.00 for this period. The Council heartily endorsed the attitude of the Committee on bills already considered, and expressed themselves as having implicit confidence in future decisions of Dr. Wishard and his Committee.

Dr. Frank B. Wynn reported applications from members for medical defense, and stated that the Committee had not yet decided upon an attorney to succeed Mr. Schortemeier. On motion carried, Dr. Wynn was instructed to make a contract at once with Mr. A. G. Cavins, our former attorney, who left us only to enter the Service.

The secretary reported that he had made the revisions of the medical defense blanks, as ordered by the South Bend session, and the Council ordered him to have them printed at once.

The Council discussed with feelings of deep regret the resignation of its former chairman, Dr. G. W. H. Kemper, who has now gone to California. In view of his many years of faithful service to this Association, it was voted to make him an Honorary Member of the Indiana State Medical Association for life. So far as the present secretary's knowledge goes, during his tenure of office, this action has been taken but once before, and that in the case of Dr. W. H. Wishard, who at that time was one of the surviving charter members of the Association. Dr. Kemper was elevated to this position in order that the American Medical Association could confer upon him the rank of Affiliate Fellowship.

After consideration of a letter from Dr. F. R. Green, it was voted that our Association would not be interested at the present time in the recommendation of sections on Public Health and Sanitation with the Admission of Laymen.

The secretary brought to the attention of the Council the storage of furniture, which was formerly in the executive secretary's office, and a motion carried that Dr. Ross arrange for the sale of this furniture.

A motion carried to increase the secretary-treasurer's salary to $500.00.

Chairman appointed Drs. Conrad, Spilman and Morgan to audit the treasurer's books.

The Council, before adjourning, expressed its thanks to President Ross for entertaining them as his guests for luncheon.

CHARLES N. COMBS, Secretary.

TREASURER'S REPORT FOR THE YEAR 1920

General Fund

Balance on hand Jan. 1, 1920		$ 2,018.78
Membership dues at $4.00 per member (15 members in service, and dues remitted)		9,992.00
South Bend exhibitors		305.00
Total		$12,315.78

DISBURSEMENTS

Journal subscriptions, $1.00 per member	$2,513.00	
Executive Secretary's office, Jan., 1920	$350.10	
Furniture storage 11 months	91.35	
		441.45
Secretary-Treasurer, stenographer		739.00
Secretary-Treasurer, honorarium		300.00
Secretary-Treasurer, postage and incidentals		71.51
Secretary-Treasurer, bond		35.00
Taxes		31.48
Committees		183.07
Councilors		42.34
Printing		116.78
South Bend session		813.75
Rental	$195.00	
Stenographic report	344.55	
Scientific exhibit	202.36	
Programs	26.15	
Registration clerks	18.00	
Badges	23.19	
Signs	4.50	
Total disbursements		5,287.38
Balance on hand Jan. 1, 1921		$ 7,028.40

Medical Defense Fund

RECEIPTS:		
Cash on hand Jan. 1, 1920		$ 2,930.99
Liberty Bonds January, 1920		5,000.00
Interest		422.72
Nothing received from General Fund on account of amount on hand being over $6,000.00.		
		$ 8,353.71
DISBURSEMENTS:		
Attorney's salary	$1,375.00	
Bond and incidentals	28.00	
Outside attorney's fees allowed	424.50	1,827.50
		$ 6,526.21
Cash on hand Jan. 1, 1921	$1,526.21	
Liberty Bonds	5,000.00	

Respectfully submitted,

CHARLES N. COMBS, Treasurer.

The treasurer has just finished reviewing the finances of the Association for the past eleven years, and wishes to place the following recapitulation on record so that it can be found in the files of THE JOURNAL of the Indiana State Medical Association for the benefit of future officers:

INCOME

	Dues	Exhibitors	Interest	Total Income
1910	$4,672.00	$	$	$4,672.00
1911	5,054.00	.....	.....	5,054.00
1912	4,960.00	.....	.....	4,960.00
1913	5,100.00	180.00	.....	5,280.00
1914	5,140.00	185.00	69.21	5,394.21
1915	5,250.00	346.00	100.21	5,696.21
1916	5,170.00	215.00	119.95	5,504.95
1917	6,161.00	290.00	135.73	6,586.73
1918	9,649.00	200.00	75.51	9,924.51
1919	7,036.00	570.00	7.52	7,613.52
1920	9,992.00	305.00	422.72	10,719.72

EXPENDITURES

	Journal	Administration	Printing, Postage	Annual Session	Medical Defense	Total Expenditures
1910	$1,774.00	$ 552.93	$144.75	$ 75.00	$.....	$2,546.68
1911	1,895.25	517.11	143.15	100.00	.....	2,655.51
1912	1,860.00	466.05	69.00	151.00	.....	2,546.05
1913	1,912.50	387.28	239.90	472.06	920.40	3,932.14
1914	1,927.50	411.82	186.85	526.35	1,311.50	5,064.02
1915	1,968.75	584.71	334.05	822.78	1,457.86	5,168.15
1916	1,938.75	829.19	224.56	901.53	1,357.75	5,251.78
1917	2,001.75	3,444.57	192.40	631.32	1,843.24	8,113.28
1918	1,915.50	2,826.79	700.36	415.57	531.01	6,389.23
1919	1,844.25	3,396.55	520.22	938.50	502.13	7,201.65
1920	2,513.00	1,843.85	116.78	813.75	1,827.50	7,114.88

(Administration includes all expenses of Secretary's, Treasurer's, Executive Secretary's offices, also councilor and committee expenses.)

INDIANA ACADEMY OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY

The mid-winter meeting of the Indiana Academy of Ophthalmology and Oto-Laryngology was held at the Claypool Hotel at Indianapolis on January 20, with an exceptionally large attendance, there being nearly seventy-five specialists registered. Dr. Joseph Addison Stucky, of Lexington, Ky., and Dr. Henry Mundt, of Chicago, were guests of the Academy.

The members of the Academy were the guests of the Indianapolis eye, ear, nose and throat men in the evening at the University Club, where dinner and numerous social stunts added to the entertainment.

The following is the scientific program carried out in full at the afternoon session: Address by the President; "Roentgenology of the Mastoid," B. R. Kirklin, Muncie; "Personal Experience with the Trephine Operation," F. A. Morrison, Indianapolis; "Streotococcic Osteomylitis of the Temporal Bone," Harry Boyd-Snee, South Bend; "Mercurochrome in Ophthalmic Therapy," M. Ravdin, Evansville.

TIPTON COUNTY

The Tipton County Medical Society met in regular session on January 11, at Tipton. A resolution was passed declaring the Society in favor of every regularly licensed physician of the State of Indiana paying a registration fee of one dollar ($1.00) per annum; said fee to be paid in and kept on hand by the State Board of Medical Registration and Examination for the purpose of defraying any expense created in behalf of the welfare of the medical profession of the State of Indiana.

The Society also passed a resolution declaring against the lowering of the standard of requirements for the practice of the healing art. The stand was taken that the fight is not against the man or woman who wishes to practice the healing art *providing* he or she has met or is willing to meet the standard of requirements that medical men and women have to meet and comply with; but is against those practicing the "healing art" after only a few weeks of superficial "study".

Copies of these resolutions were forwarded to the Senator and Representative, and to the Chairman of the Legislative Committee.

Election of officers for the ensuing year was as follows: President, R. M. Recobs, Tipton; vice-president, W. F. Dunham, Kempton; secretary-treasurer, L. M. Reagan, Tipton.

Adjourned. L. M. REAGAN, Secretary.

JASPER-NEWTON

The Jasper-Newton County Society met January 28, with Dr. W. C. Mathews at Kentland, fifteen of the twenty-five members being present. The society was very fortunate in having the topic of the evening, "Epilepsy", presented by Dr. W. C. Van Nuys, Superintendent of the Indiana Village for Epileptics.

Dr. Van Nuys is master of this subject. While epilepsy has always been looked upon as practically an incurable disease, he is convinced that on account of the great number of these cases that give a positive Wassermann, there is a field of treatment in which a great amount of good may be done. He urges an extension of the state work with an equipment by which a patient may be sent from any part of the state, and a thorough diagnosis of his case made.

After an elaborate banquet served by Dr. and Mrs. Mathews, the following resolution was adopted:

RESOLVED: That the Jasper-Newton County Society extend a vote of appreciation to Dr. Van Nuys for the paper of the evening, and especially for his plan for the extension work in favor of epileptics throughout the state.

O. E. GLICK, Secretary.

TIPPECANOE COUNTY

Regular meeting called to order at Hotel Lahr December 28 by Censor VanReed, the president and vice-president being absent. Minutes of previous meeting read and approved without change.

Clinical Cases Reported:

DR. SHAFER: Child nine months old, slightly anemic. Parents noticed enlargement of abdomen, thought it was gaseous distension. No subjective symptoms. Enlargement has increased rapidly past two weeks. Examination: Mass occupying right half of abdomen, from costal border to crest of ileum and extending to umbilicus. Abdomen opened, found retroperitoneal tumor 5 x 6 inches attached to surrounding tissues by dense adhesions. Inadvisable to remove. Aspirated part of gelatinous contents of sack for laboratory examination. Provisional diagnosis: Sarcoma of kidney.

DR. RUSCHLI: Female, white, age 22 years, high school teacher. Initial complaint: December 8 developed acute soreness over region left shoulder and left side of neck; felt chilly, slight elevation temperature, felt tired, dull, apathetic. Following day pain more severe associated with photophobia, slight headache, and seemed quite dull. Physician called; he advised to discontinue work and remain in bed. By December 10 had lapsed into comatose spells from which could be aroused, but immediately returned to sleep. Didn't volunteer conversation. Entered hospital December 14 in a stuporous condition, but could be aroused by speech; responded intelligently to questions. Had imperfect deglutition and was unable to void; catheterization yielded 63 ozs. urine.

On Entrance: Temperature 101, pulse 80, respiration 16. Stupor deepened, eyes closed all the time, some delirious talking of school work. Developed a general yielding spasticity of muscles causing rubbery movements. Temperature around 102 for about one week, then down by lysis, reaching normal in ten days after admittance (December 24).

Examination: Practically entire skull negative, including eyes and mastoid. Thyroid negative. Negative Kernig and Babinski. Knee reflexes normal. Urinary organs negative. Widal negative. Laboratory examination of feces negative. Spinal puncture showed slight increase in pressure, but on the whole negative. No definite blood pathology. Leucocytes on December 14, 11940; on December 17, 7700. No history of influenza. Diagnosed encephalitis lethargic, which was confirmed on December 18 by Dr. Hugh Patrick.

Stupor gradually began to subside, resulting finally in insomnia and desire to talk. Hesitation in speech, seemingly to be due mainly to inability to move lips. Some tremor, some nystagmus. Temperature became normal, appetite became normal. Articulation almost normal. Spasticity disappearing. Catheterization stopped December 31. Convalescing. Prognosis as to complete physical and mental recovery is doubtful.

New Business:

On suggestion that a committee should be appointed to confer with DeLong for the betterment of the Doctors' Telephone Exchange, a motion was made and carried that Dr. Shafer be appointed for the performance of that duty.

The synopsis of a proposed bill for the creation of a State Board of Chiropractic was read by Dr. Campbell of the Legislative Committee. The following motion was made and carried:

The Tippecanoe County Medical Society is utterly opposed to this or any other similar bill.

A proposed form of a local Medical Directory as worked out by DeLong of the Doctors' Exchange was presented. It was moved and carried that this proposition be tabled for one month.

A communication from Dr. J. N. Hurty was read. The text of the communication was that there was no statute in Indiana or no rule of the State Board of Health requiring a silver nitrate solution to be dropped into the eyes of a new-born child.

Dr. Bauer as secretary of the City Board of Health stated that the death rate in Lafayette was too high because of the great number of non-residents dying in our hospitals and the Soldiers' Home, all of which are credited to us. He also stated that the investigation of the local milk supply revealed that the quality was just within the law. Dr. Campbell moved that a committee of three be appointed by the president to wait upon the mayor and insist that the city milk inspector perform his duties as specified by law. Motion seconded, freely discussed and carried. The acting president announced that he would leave the appointing of the committee to the regular president. Dr. Hunter moved: That Dr. Kern be requested to report the milk situation as found by the State Inspector. This motion was seconded and carried.

The Society proceeded to the election of officers with the following result: President, D. C. McClelland, Lafayette; vice-president, Ed B. Ruschli, Lafayette; treasurer, Charles Hupe, Lafayette; censor, Wm. R. Moffitt, West Lafayette; state delegate, F. S. Crockett, Lafayette; secretary, Wm. M. Reser, Lafayette.

The secretary made the following report:

Number meetings held during year 1920.....	10
Average number present.....	25
Number members beginning year 1920.....	58
Number members lost by moving away during year	2
Number new members admitted during year....	4
Number members at end of year 1920.....	60

Adjourned; members present 27, visitors present 1.

W. M. RESER, Secretary.

INDIANAPOLIS MEDICAL SOCIETY

November 23d.

Meeting was called to order by the president, Jas. H. Taylor.

Minutes of the previous meeting were read and approved.

The applications of Drs. Chester A. Stayton and J. L. Jackson were read for the first time.

The application of Dr. H. W. Corya was read for the second time. Dr. Emory D. Lukenbill was elected to membership in the Society.

Dr. Lewis C. Cline, an active member of the Society for thirty-four years, was elected to honorary membership.

The offer of the Indiana Dental College of a meeting place for the local Medical Society was referred to the Council.

PROGRAM:—Paper—*"Puerperal Eclampsia"*: DR. JANE M. KETCHAM.

Abstract—Eclampsia is a disease probably of endocrine or toxic origin appearing in the latter months of pregnancy. It is one of the worst conditions which ever confronts an obstetrician. Its presence may be forecasted by scanty urine with albumen and casts retinal hemorrhages and exudates, and blood pressure above 150 mm. Hg. systolic, and mounting. The newer blood chemistry, to date, will give the picture of nephritis, but will not differentiate eclampsia from uremia, being allied conditions, but not identical. Treatment may be radical or conservative and the conservative is favored.

Paper—*"Pathology, Diagnosis and Surgical Treatment of Cancer of the Stomach"*: DR. W. D. GATCH. No abstract submitted.

Discussion—Dr. A. M. Mendanhall. Much progress has been made in the last ten years in this subject. The mortality has been greatly reduced due to conservative treatment. Radical measures are contra-indicated. The necessity of prenatal care was emphasized, especially blood pressure readings. Many cases have eclampsia without albumen or casts being found. Pituitrin and ergot ought not to be used to induce labor. Do not overtreat cases during convalescence.

DR. J. O. RITCHEY—Etiological factor in eclampsia not definitely known. Much discussion regarding the role played by nitrogenous elements in blood. Creatinin not increased. Acidosis theory practically abandoned. The endocrine secretions combat the foreign and harmful substances in the blood stream of pregnant women. In treatment, blood transfusion or horse serum may be beneficial.

DR. RALPH L. LOCHRY—Ninety-five per cent of stomach tumors malignant. Cooperation of general practitioner and x-ray specialist is necessary. X-ray helps decidedly in determining operable cases. Aids in determining metasteses in other organs (lungs, liver, etc.). An ulcer involving the pyloric end is a surgical case. Differential diagnosis—tuberculosis of stomach rarely found—gall bladder involvement may be confusing.

DR. O. B. NORMAN—Cited a case of cancer of stomach recently seen which was operated with considerable improvement. Emphasized importance of operations.

DR. F. E. ABBETT—Commented on growth of conservative treatment in eclampsia. Surgeon without obstetrical training not competent to consider these cases. Veratrum is a very dangerous drug. Is given empirically. Should not be given unless in cases of rapid heart and high blood pressure. Mentioned the importance of eye ground examinations.

DR. C. E. FERGUSON—Too much surgery has been done in eclampsia. Has reported six cases in which eclampsia came on at the eighth month and by conservative treatment went to term. Of these six coses —five living children and one dead resulted. No two cases alike and each one must be carefully studied. Ether is the anesthetic of choice to control spasm. Epigastric pain, an early symptom of eclamsia, is often mistaken for gallstone colic. Morphine has been criticized because it locks up the secretions. This objection is not well taken.

DR. L. BURCKHARDT—Owing to prenatal starving during the war eclampsia has decreased in Germany, while Switzerland shows an increase. In these cases the general practitioner gets alarmed and rushes to the surgeon for help. Eclampsia is a symptom and not a clinical entity. Placental infarcts give a very favorable ground for the absorption of toxins from decaying tissues.

DR. A. B. GRAHAM—Surgery has made much progress in cancer of the stomach. However, the surgeon does not get these cases early enough.

Emphasized the importance of chemical analysis of gastric contents in suspected cases. Constant pain is a constant symptom of cancer of stomach. Impairment of motor activity also a symptom. X-ray is valuable in diagnosis.

DR. A. S. JAEGER—Mentioned necessity of early study of these cases. Gastro enterostomy soon will be an obsolete operation. Eclampsia is a toxemia, probably an acidosis. Surgeons see cases late and do not have a fair chance.

DR. SCOTT R. EDWARDS—Discussed the contrast of blood sugar tolerance to glucose in cancerous and non-cancerous patients.

DR. WM. H. FOREMAN—Dilatation of the stomach has contributed to the relief of patients suffering from inoperable cardiac cancers. These cases demand treatment.

DR. J. M. KETCHAM (in closing)—Disclaimed any intention of publicly assailing the surgeon.

DR. W. D. GATCH (in closing)—Patients should be kept under expert dietetic care following operation.

Meeting adjourned; attendance 114.

L. H. MAXWELL, Secretary.

November 30th.

The meeting was called to order by the president, Dr. Jas. H. Taylor.

The minutes of the previous meeting were read and approved. Dr. Alfred Henry, President of the Council, reported that the next meeting would be held at the Indiana Dental College in order that the Society might judge the advisability of accepting the Dental College invitation.

PROGRAM:—"*Alpha and Omega*":

DR. A. T. CUSTER.

Abstract—The beginning and the end. The mouth and the rectum. A war against mouth filth has been waged by both physicians and dentists. Little or nothing has been said about the rectum. Few consultants ever make a rectal examination. Ninety percent of patients complaining of stomach and bowel trouble and those complaining of trouble in the reproductive organs have rectal trouble in some form. The close relationship between the nerve mechanism of the rectum and the so-called sympathetic nervous system must be patent to every physician as evidenced by the immediate response to rectal dilitation under anesthesia. Astonishing results are obtained in migrain and hysteria by simple dilitation of the sphincters. Twenty percent of gynecological disturbances are in the writer's opinion traceable to primary rectal disease. The careful physician is beginning to find in the rectal field conditions which at least are worthy of careful consideration in its relation to other organs and their pathology.

Paper—"*A Clinical Investigation of Halle's Hypothesis Concerning Renal Tuberculosis*" (Lantern Slides):

DR. H. G. HAMER AND DR. H. O. MERTZ.

No abstract submitted.

Discussion—Dr. Geo. W. Combs—Dr. Custer made no mention of the absorption of toxins following occlusion from stricture or neoplasm. Theory of vaginocele from accumulation in rectum is correct. What about the primary cause? We take a few stitches, bring the parts back to normal and the original cause is forgotten. There are many reflexes from the rectum, but I have never noted any head symptoms such as migraine. The connection of the hypogastric and inferior mesenteric plexi with the lower rectum is very close and we may have symptoms from them. The sciatic is a prolongation of the sacral plexus and naturally therefore may have abdominal reflexes and false sciatica.

DR. V. H. MOON—It is both a pleasure and an embarrassment to discuss a paper so complete. The distribution and the stage of the process is a large factor in the curability. I desire to question the lymphogenous origin of renal tuberculosis. The flow is from and not toward the kidney. A case of pulmonary tuberculosis may show tubercle bacilli in the urine and yet at death no tuberculous lesion be found in the kidney. The kidney parenchyma is not so favorable a soil for tuberculosis as the epithelial cells of the pelvis. Therefore, the pelvis is more often attacked and not necessarily by the lymphogenous route. If there is a local circumscribed lesion in the parenchyma neither the patient nor the physician are aware of the fact nor is there any way of finding out. A pylogram shows nothing and there are no tubercle bacilli in the urine. This is a medical case. In case of a lesion in the parenchyma not "walled off" there will be extension to the pelvis with a mixed infection, bleeding, tubercle bacilli in the urine, pain and bladder irritation. This case if not treated surgically will involve the entire kidney and result in an autonephrectomy.

DR. A. C. KIMBERLIN—Drs. Hamer and Mertz have given a very practical presentation of their subject and it is of great value and use to all of us. The types of infection mentioned all tend to become chronic. The tissues of the genito-urinary tract are all so closely connected that involvement of one generally means involvement of all of them. Temperature and loss of weight do not necessarily accompany renal tuberculosis. This condition may last a lifetime. Tuberculosis of the kidney is of hæmatogenous origin. A process in the parenchyma may apparently subside and we have a clinical but not a pathological cure. It is an excellent idea to get this condition before the general physicians in a practical form. They are the "shock troops" and must be ready for the emergency.

DR. P. E. MCGOWN—It is impossible to remember the many phases of the subject, but I do not believe this is practical. The closed type parenchymatous type is not diagnosed especially when these tend to spontaneous cures. If the symptoms persist the kidney will not yield to medical measures. If closed type in the beginning it is now turning to the open pelvic type. As to autonephrectomy: a kidney becoming caseous and having a closed ureter can cause trouble. Cited a case with symptoms recurring after two years. Cystoscopic examination showed a closed ureter. Also had a double tuberculous epididymitis and some prostatic involvement both secondary to the renal tuberculosis—I believe in operating tuberculous conditions of the genito-urinary tract.

DR. BERNHARD ERDMAN—Cited a case under observation for four years. Had bladder symptoms associated with infection somewhere. Family history of tuberculosis and cancer. Repeated cystoscopy failed to show bladder ulcerations. Last summer had an acute illness. Repeated examination of urine for tubercle bacilli negative. Ureteral catheterization impossible. Complete occlusion on left, partial on right side. Permanent catheter drainage established four weeks prior to death. Autopsy showed multilocular tuberculous abscesses of right kidney and complete autonephrectomy of left kidney. It seems to me this case shows all the stages mentioned by the writers.

DR. F. W. CREGOR—I am sorry Drs. Hamer and Mertz failed to show tuberculosis in other parts of the body. This is an important consideration before surgery is done. Certainly a bad kidney with a constantly potentially infected blood stream from other foci would speak against surgical interference.

DR. CUSTER (in closing)—I only wish to emphasize the prevalence of reflex disturbances due to rectal involvement.

DR. HAMER (in closing)—This subject offers a source of inexhaustible discussion. Much credit is due Dr. Mertz for working up the clinical presentation and also for translating the original article of Halle.

DR. MERTZ (in closing)—We hoped to prove or disprove curability of these conditions. We think we have disproved it. Also wish to call attention to

renal tuberculosis which oftentimes is evidenced by reflex and other symptoms from the bladder, prostate and other parts.

Meeting adjourned; attendance 106.

L. H. MAXWELL, Secretary.

RANDOLPH COUNTY

The Randolph County Medical Society at their regular meeting adopted the following Memorial and Resolutions upon the death of Dr. Granville Reynard:

"If it can be truthfully said of any man that he has done in his life more good than evil, then is the world better for his having lived. No need of praise can add to the measure of a life rounded up, completed, the volume ended, the record closed and sealed with the clasp of death.

"Memorials in brass and marble, in undying verse and imperishable utterances, have come down through the ages to inspire the ambition of youth and stir the pulses of manhood, and it is fitting that we should pause a brief moment amid the absorbing cares of daily life and mark the footprints of our friend who has gone from among us.

"We have been called upon to note the passage of another human life, to pay a sincere tribute of respect and esteem to one who was once a colleague in our daily work. Now he has gone, and has taken with him to his new home an honest purpose to succeed, an earnest intention to do right and a conscientious determination to merit the esteem and confidence of his associates. Some men carry with them on earth a presence that invites your confidence, a demeanor that demands your respect, a simplicity that wins your love. Such was the man of whom we have been delegated to write. Poor indeed are our words to pay him tribute. No eulogy here pronounced can satisfy the high demands of those who were nearest to him and those who knew him best during his lifetime.

"Dr. Granville Reynard was born on a farm in Randolph County, Indiana, April 26, 1857, and departed this life November 25, 1920. He was the son of Nathan and Eliza Ann Reynard, pioneers of Randolph County, who reared their children in the peaceful, loving principles of the Society of Friends, which no doubt formed the basis for Dr. Granville's kindly, gentle disposition and everlasting loyalty to suffering mankind. He always craved for education, and after the foundation was laid in the district schools he attended the Winchester high school, and then followed a number of years teaching in district schools and the public schools of Union City, Ind. It was while teaching that he decided to cast his lot with that noblest of grand professions, Doctor of Medicine. Subsequently he began the study of medicine in the office of Dr. John T. Chenoweth of Winchester. He then attended the Ohio Medical College at Cincinnati, Ohio, where he graduated in the class of 1881. He immediately located at Castine, Ohio, where he practiced for over three years, and then moved to Union City, Indiana, where he continued the practice of medicine till the time of his demise.

"He was a member of the Union City Board of Education, United States Pension Examiner, surgeon for the Big Four Railroad Company, County Health Commissioner, and was a member in good standing of the Randolph County Medical Society, the Indiana State Medical Association, and the American Medical Association.

"Dead in the vigor of his manhood, in the hour of his best work.

"Dead in the bosom of his family; dead in the midst of faithful friends and colleagues. And yet, to live in the hearts we leave behind is not to die, but laid to rest where the flowers of spring will bloom in beauty above his dust.

RESOLUTIONS

"WHEREAS: On the 25th day of November, 1920, our honored colleague passed away, and

"WHEREAS: During his life he was tireless in his profession, and

"WHEREAS: In his death his family has lost a devoted husband and father, the community a useful member, and the medical profession an honored and wise counselor;

"THEREFORE: Be it resolved, That this society tender our sincere sympathy to his family and friends, and that a copy of these resolutions be furnished the family of our deceased member, a copy retained by the society, and a copy sent to THE JOURNAL of the Indiana State Medical Association for publication.

"Committee,
"GRANT C. MARKLE, M.D.,
"F. A. CHENOWETH, M.D."

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

NEOCINCHOPHEN.—The ethyl ester of methyl-phenyl-quinolin-carboxylic acid. It was first introduced as novatophan. The actions and uses of neocinchophen are the same as those of cinchophen (New and Nonofficial Remedies, 1920, p. 224), only it is tasteless.

TOLYSIN.—A brand of neocinchophen complying with the N. N. R. standards. It is supplied in the form of a powder and as tolysin tablets 5 grains. Calco Chemical Co., Bound Brook, N. J.

SALIGENIN.—Salicyl Alcohol. Saligenin is a local anesthetic, similar in action to procaine. It is said to be as effective as procaine, but much less toxic; also the anesthesia produced lasts longer, and for this reason the addition of epinephrin is not necessary. Saligenin is a white solid soluble in water.

SALICAINE.—A brand of saligenin complying with the N. N. R. standards. Calco Chemical Co., Bound Brook, N. J. (*Jour. A. M. A.*, Jan. 8, 1921, p. 113).

PNEUMOCOCCUS VACCINE No. 14—BEEBE.—A pneumococcus vaccine (see New and Nonofficial Remedies, 1920, p. 285) containing Types I, II, III and IV diplococci pneumoniæ in equal proportions, suspended in physiological solution of sodium chloride, each Cc. containing 500 million killed bacteria. Marketed in vials of 6 Cc., 10 Cc., and 20 Cc. Beebe Laboratories, Inc., St. Paul, Minn.

TYPHOID-PARATYPHOID VACCINE No. 39—BEEBE.—A typhoid vaccine (see New and Nonofficial Remedies, 1920, p. 291) marketed in packages of three 1 Cc. vials, each Cc. containing 1,000 million killed typhoid bacilli, 500 million each of killed paratyphoid bacilli A and killed paratyphoid bacilli B, suspended in physiological solution of sodium chloride; also marketed in 30 Cc. vials. Beebe Laboratories, Inc., St. Paul, Minn.

COLON VACCINE (ACNE) No. 11—BEEBE.—A colon bacillus vaccine (see New and Nonofficial Remedies, 1920, p. 282) marketed in packages of six 1 Cc. vials, each Cc. containing 1,000 million killed colon communis bacteria suspended in physiological solution of sodium chloride; also marketed in packages of one 10 Cc. vials and in packages of one 20 Cc. vials. Beebe Laboratories, Inc., St. Paul, Minn.

ACNE BACTERIN MIXED No. 10—BEEBE.—A mixed bacterial vaccine (see New and Nonofficial Remedies, 1920, p. 295) marketed in packages of six 1 Cc. vials, each Cc. containing 500 million killed B. acni vulgaris, 1,000 million killed staphylococci albi and 500

million killed staphylococci aurei suspended in physiological solution of sodium chloride; also marketed in 10 Cc. vials and 20 Cc. vials. Beebe Laboratories, Inc., St. Paul, Minn.

ADALIN TABLETS 5 GRAINS.—Each tablet contains 5 grains of adalin (see New and Nonofficial Remedies, 1920, p. 63). Winthrop Chemical Co., New York.

VERONAL SODIUM TABLETS 5 GRAINS.—Each tablet contains 5 grains of veronal sodium (see New and Nonofficial Remedies, 1920, p. 84). Winthrop Chemical Co., New York.

NOVASPIRIN TABLETS 5 GRAINS.—Each tablet contains 5 grains of novaspirin (see New and Nonofficial Remedies, 1920, p. 248). Winthrop Chemical Co. (*Jour. A. M. A.*, Jan. 15, 1920, p. 179).

PHENETSAL.—SALOPHEN.—The salicylic acid ester of acetaminophenol. The actions of phenetsal resemble those of phenyl salicylate (salol). It acts as an antirheumatic, antipyretic, antiseptic and analgesic. Phenetsal is white, odorless and tasteless. It is almost insoluble in water.

SALOPHEN.—A brand of phenetsal complying with the N. N. R. standards. It is supplied as powder and as Winthrop tablets of salophen 5 grains. Winthrop Chemical Co., New York.

SALOPHEN.—A brand of phenetsal complying with the N. N. R. standards. Morgenstern & Co., New York.

CINCHOPHEN-CALCO TABLETS 7.5 GRAINS.—Each tablet contains 7.5 grains of Cinchophen-Calco (see New and Nonofficial Remedies, 1920, p. 225). Calco Chemical Co., Bound Brook, N. J.

PROCAINE-SQUIBB.—A brand of procaine (see New and Nonofficial Remedies, 1920, p. 29) complying with the N. N. R. standards. Procaine-Squibb is supplied as a powder, as hypodermic tablets procaine-Squibb three-fourths grains, and as solution tablets procaine-Squibb one and one-eighth grains. Squibb & Sons, New York.

GLOBULES BENZYL BENZOATE—H. W. & D.—Each gelatin capsule contains benzyl benzoate—H. W. & D. (see New and Nonofficial Remedies, 1920, p. 49) 5 minims, diluted with olive oil. Hynson, Westcott & Dunning, Baltimore, Md. (*Jour. A. M. A.*, Jan. 22, 1921, p. 245).

PROPAGANDA FOR REFORM

GLOVER'S CANCER SERUM.—In an envelope bearing the name "T. J. Glover, Research Laboratory, Toronto, Canada," but mailed, apparently from New York, physicians are receiving "literature" about Dr. Glover's Cancer Serum. This is stated to be a serum from immunized horses "between the ages of seven and nine years, of the roan type", and is claimed to have a specific action on every known type of cancer. The advertising offers to send the serum on receipt of price. While this would indicate that the Glover Research Laboratory had received a permit from the U. S. Public Health Service licensing the interstate sale of the serum in the United States, no such license has been issued (*Jour. A. M. A.*, Jan. 1, 1921, p. 52).

DIPHTHERIA ANTITOXIN AND DIPHTHERIA BACILLI.—The well established curative properties of diphtheria antitoxin must not be confused with its possible value as a prophylactic against the disease. Attempts have been made to apply diphtheria antitoxin locally in the pharynx and nares with the hope of eradicating the objectionable micro-organisms that may have found lodgment there. Recent investigations to determine the effect of diphtheria antitoxin in preventing lodgment in and growth of the diphtheria bacilli in the nasal passages of animals were entirely negative (*Jour. A. M. A.*, Jan. 1, 1921, p. 41).

PHARMACEUTICAL BARNUMS.—The exploiter of nostrums to the medical profession, realizing that at least a pretense must be made of giving the composition of medicaments offered to the physician, declares that his clay poultice has for its base "anhydrous and levigated argillaceous mineral". This sounds much more imposing than "dry and finely powdered clay", and satisfies by its very sonorousness. Now comes a product exploited chiefly to members of the dental profession, but also, it seems, to physicians. These are "activated" tablets which are "an anodyne, analgesic, febrifuge sedative, exercising (sic) antineuralgic and antirheumatic action". Their composition is stated to be "An activated, balanced combination of the mono-acetyl-derivative of para-amidophenetol together with a feebly basic substance in the alkaloidal state from the Thea-Sinensis". This means nothing more than acetphenetidin (phenacetine) and caffein (*Jour. A. M. A.*, Jan. 1, 1921, p. 42).

ECHINACEA.—Intelligent members of the medical profession must be well aware that both the Pharmacopeia of the U. S. and the National Formulary include many products that can scarcely be justified as medicinal on the basis of scientific consideration. Among the products included in the National Formulary is the fluid extract of echinacea. In 1909 a report of the Council on Pharmacy and Chemistry denied echinacea a place in New and Nonofficial Remedies because there was no evidence to show that it possessed therapeutic value. Despite this, echinacea is used extensively. The fluid extract and the tincture are made in enormous quantities, and the root enters into the composition of a large number of "patent", proprietary and non-secret mixtures. For this reason Couch and Giltner of the U. S. Bureau of Animal Industry made an extensive experimental study of echinacea therapy. Animal experiments designed to determine whether the drug possessed the properties that are ascribed to it gave negative results in every instance (*Jour. A. M. A.*, Jan. 1, 1921, p. 39).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Dermacilia Eye Remedy and Ointment (The Dermacilia Manufacturing Co.), the first falsely claimed to be an effective treatment and cure for sore eyes of all forms, the second falsely claimed to be effective for all skin and scalp affections and for all kinds of eczema. Roger's Liverwort, Tar and Canchalagua (Williams Manufacturing Co.), falsely and fraudulently recommended for treatment of consumption, asthma, whooping cough, influenza, etc. Valesco (Alhosan Chemical Co.), falsely and fraudulently recommended as a remedy for tuberculosis, asthma, pneumonia, etc. (*Jour. A. M. A.*, Jan. 1, 1921, p. 52).

SERUMS AND VACCINES IN THERAPY.—In the development of serums and vaccines, scientific investigation and experimentation have preceded clinical tests of those products which have proved of permanent worth. Whenever the clinical use of serums and vaccines has proceeded beyond well established facts determined by laboratory research, the result has usually been disappointing. To submit a serum or vaccine for clinical trial without successful preliminary laboratory investigation of its probable worth is an imposition on the profession. The success of diphtheria antitoxin and antityphoid vaccine has prejudiced the profession and public in favor of vaccines and serums so that they are willing to accept a new serum or vaccine simply because it is a serum or vaccine. In his introduction to a series of articles

on serum and vaccine therapy which is now being published by the Council on Pharmacy and Chemistry, Flexner points out that in only a few instances has the anticipation been realized that a curative antiserum for each disease would be discovered. The history of antipneumococcus serum affords a striking example of the difficulties and pitfalls that are encountered in the development of remedies of this class. Thus far only one therapeutically active serum, Type I, has been developed, and this serum is not effective against infections by other types of pneumococci. Despite this, we are being offered today for clinical use "polyvalent" antipneumococcic serums recommended by the makers for the use in all types of pneumococcus infection (*Jour. A. M. A.*, Jan. 8, 1921, p. 115).

INHALATION THERAPY.—The possibility of effecting absorption of many drugs, other than the anesthetics, by inhalation is beyond question. Mercury, for example, has been so administered. The difficulties that attend such a procedure relate in particular to the uncertainties of accurate dosage. It has lately been demonstrated that calcium chloride solutions can be nebulized for inhalation so that the salt is absorbed from the respiratory tract. Since absorption of calcium from the alimentary tract is slow, indefinite and undependable, while subcutaneous or intravenous administration is objectionable or impracticable or both, attention becomes directed to the inhalation method of administering calcium. However, while small quantities of calcium are of dubious value, recent investigations indicate that the administration of larger amounts by inhalation methods is liable to exceed the limits of advisable concentration in the blood without any suitable mode of regulation. These findings may be a timely warning at a period when therapeutic novelties are likely to be proposed in increasing numbers (*Jour. A. M. A.*, Jan. 8, 1921, p. 116).

MORE MISBRANDED VENEREAL NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities on the ground that the curative claims made for them were false and fraudulent: Saxon Gonorrhea Injection (Saxon Co.), represented as a treatment, remedy and cure for gonorrhea, gleet and the prevention of stricture. Santa-lets (Sharp & Dohme), represented as a treatment, remedy and cure for gonorrhea, gleet, catarrh of the bladder—acute or chronic—whether due to gonorrheal infection or other causes. Specific Globules No. 37-77 (Sharp & Dohme), claimed to be an improved combination for the treatment of gonorrhea and its complications. Methylets (Sharp & Dohme), claimed to be of great value in all forms of urethritis, especially gonorrheal and allied varieties. Saxon Methygon Tablets (Saxon Co.), claimed to be a reliable remedy for treating gonorrhea and gleet. Columbia Short Stop (Columbus Drug Co.), recommended for "gonorrhea, gleet, running range, inflammation of the kidneys and bladder". Allan's Compound Extract of Sarsaparilla with Iodide (Allan-Pfeiffer Chemical Co.), claimed to be the best known remedy for syphilis, a powerful purifier of the blood and to have other curative effects. Bonkocine (J. E. Gasson), sold with the claim that "well defined cases of gonorrhea yield to treatment in one to five days, chronic gonorrhea and gleet in five to ten days, provided they are not complicated with stricture or enlarged prostate gland" (*Jour. A. M. A.*, Jan. 8, 1921, p. 126).

TONA-VIN.—To those familiar with nostrum advertising, the advertisements which have appeared in newspapers for "Tona-Vin" made it fairly easy to classify the product as probably belonging to the class of alcoholic nostrums that are being born over night in order to meet—or beat—the exigencies of the prohibition law. According to the label the preparation contains "soluble iron and quinine, fluid extract of senna leaves, wild cherry and aromatics". The A. M. A. Chemical Laboratory analyzed Tona-Vin and reported that it is a dark-brownish liquid having an odor like wild cherry and wine and a slightly bitter, somewhat sour taste. The presence of 18 percent of alcohol is declared on the label. The analysis demonstrated that the amount of quinine was so small that, to obtain a single tonic dose of quinine, it would be necessary to drink the contents of about 1.4 bottles of the preparation. The chemists further found that, to obtain an average dose of iron, the individual would be obliged to drink the contents of an entire bottle of Tona-Vin. When one ounce was dealcoholized and swallowed by a healthy man, no effect except a doubtfully laxative action was noted. Evidently Tona-Vin is not sufficiently medicated to prevent its use in moderate amounts as beverage. There is, of course, no legitimate reason for administering such drugs as iron and quinine and senna, in ridiculously small doses, in a menstruum containing 18 percent of alcohol (*Jour. A. M. A.*, Jan. 15, 1921, p. 193).

POLYVALENT VACCINES FOR COLDS.—At least five commercial manufacturers of biologic products make and push the sale of vaccines to prevent colds. Of these at least two, from time to time, have added new strains of bacteria to the formulæ with which they originally introduced their products, so that seventy-five or eighty different types of bacteria are now included. Every year different types, varieties and species of bacteria have been associated with colds in different parts of the country. Presuming—although it has never been proved—that any vaccine has value in preventing colds, the logical thing to do is to prepare a specific vaccine for each form of cold in each part of the country. Commercially, it is much more profitable to mix all the bacteria together, to prepare a vaccine and to inject this into the patient in the hope that some organism will produce antigens which will find their mates. The present day shotgun biologic mixture is more ridiculous than the old shotgun proprietary—and a greater menace to public health and to scientific medicine (*Jour. A. M. A.*, Jan. 15, 1921, p. 182).

SPIROCIDE NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry reports that Spirocide is advertised as a new and successful treatment of syphilis by fumigation and inhalation. The product is furnished in the form of tablets which are stated to be composed of metallic mercury, copper sulphate, cypress cones, henna, nutgall and dried pomegranate. Experiments in the A. M. A. Chemical Laboratory showed that when the tablets are ignited the organic constituents are consumed, the mercury is volatilized and most, if not all, of the copper remains behind. For use, the patient sits on a chair, the tablet is ignited, and the patient is covered with a sheet so that he will inhale the mercury vapors produced. The Council obtained the opinion of syphilographers with regard to the evidence submitted by the Spirocide Corporation, which markets the product, and as to the advisability of giving recognition to a method for the administration of mercury by inhalation. In consideration of the opinions expressed by its consultants, the Council declared Spirocide inadmissible to New and Nonofficial Remedies because, first, the claims made for it are unproved and unwarranted; secondly, the routine use of an inexact method for the administration of mercury is detrimental to sound therapy; and thirdly, the name is not descriptive of the composition, thus failing to remind the physician

who uses the pastils that he is administering metallic mercury (*Jour. A. M. A.*, Jan. 22, 1921, p. 259).

HELMITOL OMITTED FROM N. N. R.—Helmitol is hexamethylenamin methylencitrate. It was introduced with the claim that it was superior to hexamethylenamin (which acts in acid fluids only) in that it is equally efficient whether the urine is alkaline or acid. In 1918 the Bayer Co., which then marketed the product in the United States, was notified that the Council on Pharmacy and Chemistry questioned the claims and desired evidence for their substantiation. In 1919 the same notification was sent the Winthrop Chemical Co., which in the meantime had secured control of the product. Pending the submission of evidence, the Council continued Helmitol in New and Nonofficial Remedies with the statement that the action and uses were those of hexamethylenamin. Now the Council on Pharmacy and Chemistry announces that Helmitol has been omitted from New and Nonofficial Remedies for the reason that the claims under which it was introduced have been disproved by P. J. Hanzlik, who demonstrated that the alkalinity required to split off formaldehyd from helmitol is greater than exists in urine, even in the advanced ammoniacal fermentation (*Jour. A. M. A.*, Jan. 22, 1921, p. 260).

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Benetol Suppositories (Benetol Co.), misbranded in that unwarranted therapeutic claims were made for them. Vinol (F. Stearns & Co.), misbranded in that false and fraudulent claims for curative effects were made for it. Mir-A-Co (Mir-A-Co Co.), sold with false and misleading statements regarding its composition and with fraudulent therapeutic claims. Novita Globules; Novita Capsules; Novita Salve, Stainless; Novita Salve, Brown (Novita Co.), misbranded in that the therapeutic claims were false and fraudulent. Pepso-Laxatone (Burlingame Chemical Co.), adulterated in that it did not contain diastase or pancreatin as claimed and that the therapeutic claims made for it were false and fraudulent. Alkano (Alkano Remedy Co.), offered under false and fraudulent therapeutic claims (*Jour. A. M. A.*, Jan. 29, 1921, p. 326).

BIOLOGIC THERAPY.—The various problems, the contradictory opinions and the commercialization of biologic therapy, induced the Council on Pharmacy and Chemistry to appoint a committee to prepare and publish an authoritative review of this subject. The object of the series, which has now been published, was to present to physicians concise, authoritative statements concerning indications, contraindications, methods of administration, dosage, value and possible danger of serums, vaccines and non-specific proteins in the treatment of infectious diseases (*Jour. A. M. A.*, Jan. 29, 1921, p. 318).

FOREIGN PROTEIN THERAPY.—While striking clinical changes, sometimes to the apparent profit of the patient—but sometimes decidedly otherwise—may follow the injection of foreign protein, it is generally agreed that the method lacks the requisite amount of carefully controlled observations which would entitle it to acceptance as an approved procedure for general use. Most serious is the attempt of pharmaceutical houses to push the use of alleged specific methods of treatment, which the thinking physician will at once realize are methods of inducing protein shock. Research with such products in laboratories and in hospitals under suitable control may be permissible, but indiscriminate use in general practice is a far different matter (*Jour. A. M. A.*, Jan. 29, 1921, p. 315).

BOOK REVIEWS

CRILE AND LOWER'S SURGICAL SHOCK (Second Edition of "Anoci-Association")—Surgical Shock and the Shockless Operation Through Anoci-Association. By George W. Crile, M.D., Professor of Surgery, School of Medicine, Western Reserve University, Cleveland; and William E. Lower, M.D., Associate Professor of Genito-Urinary Surgery School of Medicine, Western Reserve University, Cleveland. Second Edition of "Anoci-Association" Thoroughly Revised and Rewritten. Octavo of 272 pages with 75 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, $5.00 net.

This new edition of Dr. Crile's most interesting observations upon the subject of anociation has been fortified by the rich experience afforded by the great war. The results thereof have surely met all the expectations of the originator of this fascinating theory and have served to establish the soundness of anociation as a working principle in conservative surgery. One cannot read the book without becoming quite enthused over the subject and largely because of the great amount of experimental data offered in corroboration of the premised theories.

The arrangement of the book is both gratifying and practical, particularly so the chapter on transfusion since Dr. Crile, one of the pioneers in and ardent advocate of the direct method now endorses the indirect, citrated method as the one of choice.

In the chapter on anesthesia the authors again present their plea for the more general use of nitrous oxide, inasmuch as it has proven in their experience almost a specific against shock.

All surgeons will be intensely interested in this book.

ORTHOPEDIC AND RECONSTRUCTION SURGERY, INDUSTRIAL AND CIVILIAN. By Fred H. Albee, M.D., F. A. C. S., Professor and Director of Department of Orthopedic Surgery at the New York Post-Graduate Medical School and at the University of Vermont. Octavo volume of 1138 pages with 804 illustrations. Philadelphia and London; W. B. Saunders Company, 1919. Cloth, $11.00 net.

Such has been the progress made in this hitherto much neglected field of medicine and surgery that the appearance of Dr. Albee's comprehensive treatise is both timely and gratifying.

Despite the author's many achievements in the operative field of orthopedics he has, nevertheless, not failed to incorporate in his book the well-proven principles of medicine dependent for their elucidation upon a comprehensive study of the essential branches, anatomy, physiology, bacteriology and immunology, pathology, and the various methods of non-operative treatment, including hydro- and electro-therapy, massage, vaccine therapy, etc. A condensed and interesting resume of Billing's and Rosenow's work on focal infection and its relation to the various arthropathies, is included.

The technique and results of Dr. Albee's extensive autogenous bone inlay work are given in considerable detail. This method of treatment of Pott's disease of the spine certainly seems destined to supplant all others in properly selected cases, for one cannot follow the splendid results obtained by it without becoming convinced that heretofore there has been no form of treatment the results of which can compare with those now obtainable by the spinal graft.

Unfortunately there are a few typographical errors which in future editions will doubtless be eliminated in this otherwise most satisfactory and comprehensive treatise on orthopedic and reconstruction surgery.

APR 2 1921
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ORIGINAL ARTICLES

DIAGNOSIS AND TREATMENT OF DISEASES AND INJURIES OF THE SPINE*

DR. GEORGE D. MARSHALL

KOKOMO, INDIANA

In presenting this subject there will be no attempt to go into the literature or to theorize upon untried methods of diagnosis or treatment, relying for data on the personal experiences of the writer and reliable data acquired by association with orthopedic surgeons who have noted the progress of orthopedic surgery for years. While in the main the paper will speak of Pott's disease, other conditions will be mentioned, mainly for the purpose of bringing out points in differential diagnosis.

The plea of the paper is for a more frequent diagnosis of Pott's disease in the earlier stages of the disease, a time when the diagnosis is more difficult to determine but when treatment is of so much more benefit in preventing deformity and constitutional symptoms. Special emphasis will be laid on methods of diagnosis that are not new but too seldom put into application, thereby causing many of the cases to go without a diagnosis until the deformity makes the condition apparent to the casual observer and the advantage of early treatment is lost.

Patients with disease of the spine apply for relief from pain, impaired function, deformity, or a combination of these symptoms. However, many patients with Pott's disease complain so much of nervousness and fatigue that the pain in the back may be mentioned in a negligible way and only brought out by close questioning, thus causing the spinal lesion to go undetected. Pain in the back may be the result of many conditions and among the acute infections causing back pain may be mentioned follicular tonsilitis, smallpox, typhoid fever, myositis, etc. These and similar causes may be recognized by the short duration, usually lasting but a few days. Pain due to neuritis can be detected by palpation of the cutaneous nerves, pressing the nerve against the rib, and mapping out the localized irritation. The occurrence of herpes zoster often uncovers the cause of pre-existing pain. Pain due to trauma of the soft parts is usually of short duration, shows evidence of trauma by swelling and discoloration, yields readily to counter-irritation and rest. Pains complained of by the neurasthenic are indefinite in location, the patient not being able to locate the pain twice in the same place when palpation of the spine is used to detect it. Pain due to fracture gives rise to point tenderness that is clearly localized, persistent in character until immobilized, the extent of the paralysis governed by the location of the fracture, and amount of hemorrhage into spinal canal. Chronic low back pain may be caused by muscular insufficiency, most often seen in women who have pendulous abdomen, and a disturbance in weight-bearing alignment. In these cases the muscles have not the power to afford the support required to keep the bony structures in proper alignment.

Subluxation of the lumbo sacral articulation is a frequent cause of low back pain. This segment of the spine is very frequently the site of periosteitis, where acute strain plus focal infection is very prone to cause organization of inflammatory exudates and give rise to spurs and rough bony processes that are the cause of pain, especially after exertion or in changeable weather, similar to any joint which is the seat of chronic arthritis. Disturbance of weight-bearing alignment, as caused by a short leg, and the resulting compensatory scoliosis, renders the lower spine very prone to periosteitis. Pyorrhea and acne vulgarus are contributing causes to stiff and sore backs. I have observed several cases where there was distinct connection between acute infection of the respiratory tract and accessory sinuses, trauma, periosteitis, and the formation of inflammatory exostoses of the lumbar vertebra, resulting in chronic back pain and impaired function. Impaired function is the result of both pain and deformity and need not be discussed separately. Deformity may be due to disease of the vertebral column, to a paralysis of the muscles, improper weight bearing

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alignment, disease of the hip joint, or to a postural defect the result of habit or vocation.

Examination can be made properly only where the whole back without clothing is available for inspection, so that the examiner can note any deviation from the normal curves of the spine. The absence of the normal curves, as seen in the straight stiff backs, is of as much importance as pronounced curvature. Stroking with the finger down the spinous processes will make a red line over them that is an aid in determining any deviation. After inspection the patient should be required to bend the body laterally, with the pelvis maintained on a level, bending slowly, first to one side and then the other, while the examiner notes any rigidity of any segment of the spine which can be seen as a break in the regular curve. Rigidity of a very short segment of the spine can be detected in this way. Requiring the patient to bend forward will show any deviation from the normal contour by an acute break in the normal curve, and segments in kyphosis or depression may be noted. Forward bending also gives a comparative idea of the mobility and strength of the back, noting any absence of the normal curves, or whether the patient crawls up his legs with his hands in assuming the upright position. The test for dorsiflexion is best made by having the patient lie face downward, allowing the thighs to remain on the table while raising the shoulder and encouraging him to allow the back to sway downward as much as possible, so that any rigidity to dorsiflexion can be detected readily. Postural defects disappear when the spine is bent, particularly in forward stooping, and is a very important means in differentiating postural defects from organic disease of the spine. Where deformity is due to paralysis there is increased mobility.

Examination of the legs for shortening is of great importance as the spinal deformity may be compensatory; a leg one inch short causes a rather marked scoliosis, "and many people have a difference of an inch in the legs, that have never had fracture or other known bone lesion". A leg one inch short causes so much back strain that it is incompatible with continued effort, especially walking and bearing a load, unless the shortening has been corrected. Immobilization or dislocation of a hip is also a cause of spinal curvature, usually in lordosis.

Pott's disease is of considerably more frequent occurrence than is recognized generally by medical men, and very often overlooked as a cause of disability. Sufferers from this disease often complain more from nervousness and fatigue than from pain in the back, and may have symptoms pointing to an abdominal condition, due to the spondylitis causing irritation of the nerves that leave the spinal canal at the point the vertebræ are breaking down.

These conclusions have been reached after examination of a large number of men in army camps, discharged soldiers, and patients in private practice. One potent reason for the frequent observance of tuberculous spine in the army was the radical change in the physical habits of many of the recruits. The man with a weak back usually followed some vocation in civil life that did not call for active physical exertion, and carried a mild or arrested Pott's without any great discomfort. Under the influence of intensive training there was a flaring up of these arrested infections, the process becoming active and in many instances deformity rapidly ensuing, with complete disability. Acute infectious diseases, particularly measles, played an important role in the flaring up process. This I have been able to observe frequently, and am led to believe that measles play an important role in exciting bone tuberculosis.

Trauma is the greatest factor in exciting Pott's disease, and a history of trauma can be obtained in practically every case. It may have been a fall down stairs; the patient may have been thrown from a horse, or direct violence may have been the cause. The immediate result of the trauma may have been of short duration, and the development of Pott's disease occurs some time later. Severe muscular exertion and the trauma incident to it frequently causes a flaring up of latent or arrested tuberculous spine, as was frequently observed in the case of soldiers. Many of these men had been in hospitals a number of times with a diagnosis of myositis, or some similar condition, and under the influence of rest in bed would feel better for a time, only to have a recurrence of back trouble after going back on duty, until a diagnosis would be made. Bone tuberculosis was incombatible with military duty, and I observed a number of cases that flared up under the influence of intense training, with resulting deformity and disability. Some of these cases will be discussed as the x-ray slides are shown. The number of cases of tuberculous spine is quite considerable among the ex-service men. Many of them give a definite history of trauma, and the carrying of the heavy pack by a man with an arrested Pott's was very likely to cause the process to become active.

One case referred to me in July, with a tentative diagnosis of gall stones, gave a history of pains in the back, in the lower dorsal region, since 1901. He was a Spanish-American war veteran, and had done duty in the Philippines, Cuba and China. He stated he was unable to do setting up exercises properly, especially lateral bending, and remembers being reprimanded on that account. He had night sweats until

seven years ago, and had reacted to the tuberculin test before his discharge from service. He had been treated for syphilis, and on various other diagnoses without relief. The Wassermann test always had been negative, and there was no history of initial infection. Physical examination showed a slight deformity of the lower dorsal spine in kyphosis, with rigidity of this segment of the spine, and an apparent shortening of the trunk. The x-ray findings were typical of old tuberculous process, with complete fusing of the vertebræ. This man has gone on for nineteen years with Pott's disease without diagnosis, and yet the physical and x-ray findings were typical.

The reading of case histories is a tiresome process to both reader and audience, and I will desist from this procedure and again call attention to the prime factors in making a diagnosis. Careful history of the patient, especially regarding trauma to the spine which may have occurred some years previous. Inquiring into the existence of hacking cough, continued colds, night sweats, hectic fever, and other signs of tuberculous process. Pain in the back after exertion. Careful examination of the spine by inspection of the whole back. Examination for rigidity of the spine, by requiring lateral bending, stooping, and dorsiflexion. Palpating for acute deviations in the spinal processes.

The x-ray plate in Pott's disease shows obliteration of the intervertebral disks, fusing of the vertebræ, and various degrees of curvature, and often evidence of periosteitis or abscess. Also gives definite information in the case of fracture. Periosteitis and spur formation give a conclusive x-ray finding.

It would be impossible to go into details concerning treatment, but I wish to call attention to the value of heliotherapy, by exposure to the sun's rays, and the application of braces. Heliotherapy is carried out by having the parts exposed to the direct rays of the sun, beginning with 15 minute exposures, and increasing the length of the exposure 5 minutes daily to establish tolerance. Exposure must be made in the open air, as glass filters the rays and robs them of much therapeutic value. Heliotherapy is of great value in treating abscess and sinus formation. Frequently rapid healing of a sinus will occur, leaving a pliable scar.

In the application of braces the effort is made to secure immobility with the spine in dorsiflexion, so the superincumbent weight is thrown on the articulating facets of the vertebræ, and taken off the bodies of the vertebræ, allowing the bodies to heal without deformity. In applying braces a proper fit is absolutely necessary to the comfort of the patient, and to accomplish results from the treatment. The brace to be removed while the patient is lying down or taking sun baths.

A plaster of paris form should be made over the patient's body, while the patient is suspended by a tripod and halter, making enough extension to correct as much deformity as possible, while the form is being made. This only requires that the super-incumbent weight above the lesion be relieved, and does not require suspension of the whole body. The skin is covered with soap, a stout cord placed in the median line in front, and the plaster bandages applied to form the desired manikin. After the plaster has partially set, it is cut down the front with a plaster knife, using the cord to protect the patient from the knife. Before the plaster is too hard the manikin can be removed, as one would remove a vest, the cut edges apposed, and few encircling bandages applied to keep the manikin in shape until thoroughly dry. The brace can be fit over this form and a perfect fit assured, by allowing for the thickness of the plaster, and attention to the further correction of deformity desired. An attempt will be made to make this procedure clearer by the demonstration of lantern slides.

DISCUSSION

DR. J. C. FLEMING (Elkhart): I think a few of these cases of lesion of the spinal cord are syphilitic. I have seen two or three perhaps in the last two or three years which were apparently gummas, probably of the dura. In these cases the patient had most intense pain, much more intense than the tubercular lesions, and they also had increase of reflexes, and they had spasms of the muscles of the legs; the legs would draw up and the patient would cry out with pain. Examination showed a positive Wassermann, and antisyphilitic treatment cured them.

Another thing we must remember, that secondary carcinoma of the spine is not a rare thing in people over fifty. A woman operated for cancer of the breast, for instance, several years later was taken with spinal symptoms which proved to be malignant metastasis of the body of the vertabræ. In the male that is very common following malignancy in the prostate.

The doctor showed two or three so-called broken backs. I think we can summarize the treatment of broken backs in this way: So-called broken backs, fracture of the vertabræ, should not be operated on unless they are on a level with the *cauda equina*. In other words, if at the time the injury is received that cord is depressed, the operation will not do any good, though where the nerve fibres are medullated they have a power of regeneration and an operation is sometimes indicated.

Another thing is that it is absolutely impossible at the time of the injury to tell how much

improvement a patient will make. In the first place, about eighty percent of them die immediately, the injury is so great that they die from the effect of it. Of the other twenty percent a large number die in a few days. A small percentage go on and live with a paraplegia for months or even years, but of that small percentage it is impossible to determine how much improvement they will make. And they often improve for several years, perhaps five or six after the injury, so that in a case of broken back we cannot make a prognosis as to just what is going to happen. Sometimes they regain considerable power in the spinal cord. Doctor Duemling just told me of a case in which a man with fracture of one cervical vertebra had complete paraplegia but lived and finally regained partial use of the muscles below this level.

In regard to x-ray of the spinal column, we must bear in mind that we cannot determine much about the fifth lumbar vertebra. If you examine one hundred x-ray plates of the spine showing the fifth lumbar vertebra it is surprising how many will appear pathological, and it is very difficult to draw any conclusions from the fifth lumbar vertebra because it so frequently appears pathological even when the patient presents absolutely no symptoms.

DR. GRACE LINE HOMMAN (Laporte): I am especially interested in Doctor Marshall's paper because I have found in the course of general examination that an arthritis of the spine is rather common, much more common than one would expect. When I was in Rochester in 1918 I picked up about ten cases of arthritis of the spine in less than one year. If one is on the lookout for it one will recognize it more quickly than otherwise. One patient I remember particularly gave a history of having had so-called "rheumatism of the hips" twelve years before. She had never had her clothes removed for a complete examination. The x-ray showed complete ankylosis of the spinal column.

As to the etiology, it is very difficult to say if the condition is tuberculous or of an infectious nature. My experience, which is perhaps limited, has been that every case of arthritis of the spine should be regarded as tuberculous until it is proved otherwise.

Another thing is, that treatment must begin early. Sometimes just simple rest in bed for a few weeks will cure the patient. But if the disease is allowed to progress, then it nearly always means fixation of the spine.

Taking the history is of prime importance in making a diagnosis, and one question I ask the patient is, "Can you put on your shoes? Do you have difficulty in turning over in bed? Do you have pains down your legs?" Nearly always he will say "Yes, I am unable to get my shoes on." That is a simple way of diagnosing it, but you will invariably find upon examination that there is considerable rigidity of the spine.

I am much interested to know what effect radium would have on these cases of tuberculous spine. Iselin has reported 800 cases of tuberculous osteo-arthritis cured by x-ray. Radium being more powerful I am wondering if it would not have just as beneficial effect. I would like to see some cases tried out with that treatment.

DR. GEORGE D. MARSHALL (Kokomo): I did not discuss lesions of the spinal cord, but of the spinal column.

With reference to the fifth lumbar vertebræ, I do not think there is any difficulty about telling pathology by the x-ray. There are a great variety of anatomical constructions, it is true, but there should be no difficulty in differentiating anatomical defects from those produced by pathology. A periosteitis should not be considered as an anatomical defect. By taking the x-ray at the proper angle you can tell about the position, and I think arrive at conclusions very definitely. I had some interesting experiences in the army. One young officer who had arthritis in the lumbar region was accused of malingering simply because his case had not been gone into thoroughly. I think periosteitis of the lumbar vertebræ is a common occurrence, but these people get absolute relief when they get proper immobilization. Many are due to focal infections—of the nasal accessory sinuses, plus traumatism.

THE DUTY OF THE STATE TO THE EPILEPTIC*

W. C. VAN NUYS

INDIANA VILLAGE FOR EPILEPTICS

NEWCASTLE, INDIANA

The program this afternoon contains two papers on the general subject of epilepsy by members of the staff of the Village for Epileptics. This is indicative of the interest of the medical profession of the state in what has been called "the most mysterious disease of human history". Moreover, it indicates your interest in the state institution for epileptics at Newcastle. You are interested in what has been done there and in our plans for the future. We hope to make this institution the best one of its kind in the world and we want your suggestion, criticism and hearty co-operation.

The physician in private practice and the

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institutional physician have different problems and different viewpoints. The former sometimes accuses his institutional brother of routine work, lack of interest in new theories concerning epilepsy, lack of appreciation of the broad community problems presented by this special class. Possessing the great advantage of early observation of his patients, he sometimes fails to note the epileptic characteristics and early signs of deterioration and relies almost entirely on the frequency and severity of seizures as indications for prognosis and treatment.

He is sometimes at a loss to account for the extremely guarded prognosis of the institutional physician who learns to measure the possibilities in a given case by study of the patient when he is at his best, that is, in the inter-paroxysmal state.

An exchange of viewpoints in papers and discussions of this kind is helpful and will enable one to better understand the problems of the other.

The literature of epilepsy is enormous and conflicting. It is true that the symptomatology has been carefully worked out and is fairly well known, but the standard text books have hardly kept pace with the really notable studies of periodic mental states known as epileptic equivalents and allied conditions. Samt, Krafft-Ebing, Pick, Turner and others have thrown much light on these obscure phases of epilepsy. One somehow gets the impression that much of our book knowledge concerning epilepsy has been handed down without question from an earlier day. Much of the literature is descriptive and historical and discloses, on comparison with the literature of syphilis, cancer and tuberculosis, a lack of research work.

On the other hand, current medical literature abounds with theories as to the cause of epilepsy and articles on special phases of the subject. Here the student is bewildered by the nomenclature. He finds that the terms essential epilepsy, idiopathic epilepsy, true epilepsy, affect epilepsy, etc., are used with different meaning by different writers. The word epilepsy is used by some to indicate a group of cases with a certain definite pathology, but most writers do not use this unqualified term. They refer to the many conditions encountered in a study of the chronic convulsive disorders as "The Epilepsies".

The terms idiopathic, essential, or genuine epilepsy were formerly applied to these cases where the cause could not be ascertained. This implied that the cause was known in the so-called symptomatic epilepsies. It was assumed that associated developmental defects, trauma, syphilis, etc., were responsible for the seizures. However, many individuals suffering from such defects, injuries and diseases do not have seizures and there are points of similarity in the individual make-up and course of the disease in these two groups. There is a tendency at the present time to limit the terms essential and genuine to those cases of epilepsy possessing what has been called the primary epileptic constitution and certainly there are groups formerly classed as symptomatic that can be so classified.

Many physicians even at the present time depend upon the seizure type for a diagnosis of epilepsy. It is not strange that such a great diversity of opinion exists in the absence of a definite etiology and pathology. The integrity of epilepsy as a distinct disease must depend on the discovery of common etiological or pathological factors. At the present time the association of the various chronic convulsive disorders is on a symptomatic basis.

In 1912 an effort was made to interest a great medical foundation in research work in epilepsy. The reply was that the subject was too broad, that many factors probably entered into the causation and that there was no point from which to start. The refusal was qualified by an offer to work out any promising leads that might be developed.

For the present we cannot exclude certain widely separated factors from the etiology of epilepsy and must agree with Shanahan that the phenomena of epilepsy are the evidences of reaction of a certain type of make-up to certain psychogenic, chemotoxic or endocrinopathic factors working separately or together. To quote Coriat, "We are dealing with a disorder of unknown nature, periodic in type, although the exact origin of periodocity is not known, and manifesting itself sometimes as a motor disturbance, sometimes as a sensory reaction and sometimes as an interruption of consciousness."

The most interesting and notable contributions to the study of epilepsy during the last ten years have been those of the psycho-analysts. The chronic epileptic possesses many unsocial and anti-social characteristics. This has been a matter of common knowledge for years. Dr. L. Pierce Clark of New York believes that certain peculiar character traits antidate the appearance of seizures and most frequently date from birth. These traits are supersensitiveness, egocentricity, emotional poverty, lack of power of adaptation. Many individuals with the above traits are self-assertive, shallow in their affections, indifferent to the rights of others. To such a make-up Dr. Clark applies the term "potential epileptic character", although he admits that many individuals possessed of these traits do not progress to true seizures. Dr. Clark believes that we should watch carefully for these "potential epileptics" and that a diagnosis of

epilepsy after the first grand mal attack is comparable to a diagnosis of tuberculosis after the formation of tuberculous cavities in the lungs. It is true that all of us possess some of these traits in greater or less degree. It is equally true that such a combination of traits, if encountered in marked degree, should be looked upon with suspicion by the physician. Because it reveals our responsibility and the possibility of early diagnosis and treatment this must be considered as one of the notable contributions to the literature of epilepsy.

The fully developed epileptic has a well defined personality and observations taken during the inter-paroxysmal period are giving us different conceptions of the nature of the disease. There is a gradual reduction in intellectual capacity which may lead to profound dementia. In milder degrees of intellectual impairment there is slowness of thought, difficulty in understanding new ideas and following the thought of others. There is more or less loss of memory with narrowing of the field of interest. The confirmed epileptic is wrapped up in himself. It is surprising how few contacts he has with the outside world. He is very much interested in matters concerning his own comfort and convenience. Trifles irritate him. Loss of relatives does not greatly concern him unless their loss affects his support or comfort. He is incapable of love in the deeper meaning of the word because he is too selfish and interested in considerations of self-love. He is, in a way, ambitious. He has confidence in his ability and is not easily discouraged. He has faith in himself and hope for the future. Few epileptics commit suicide because of this trait. When left alone he rarely commits acts of violence, but in the ordinary contacts of life he displays irritability and the slightest interferences with him may cause outbursts of violence. He has no insight as to his condition. He cannot be depended upon, more because of his peculiar characteristics than because of his occasional seizures. People shun him and he is thrown back on himself and made to lead a life of seclusion when what he needs is to have his feelings and energies directed away from himself. That the epileptic is a misfit in the community is well known to physicians and social workers. It is well known also to twenty-five or thirty thousand relatives of more than five thousand epileptics in Indiana. The presence of an epileptic in any family is demoralizing. When there are other children in the family the situation is made worse.

Bullard says that the highest proof of civilization is the care shown for the weak, disabled and unfit. No state program for the care of the diseased or unfit can get far ahead of public opinion and the physician can do more than any other to teach the public its duty towards the epileptic.

So far as it can do so it is the duty of the state to relieve the handicaps of the epileptic, and this should not be done in a spirit of charity. The epileptic is a citizen. As a citizen he has a right to an education. The responsibility of the state is not decreased because of the disability of the individual. He is entitled, also, to a training that will fit him to be less of a burden. If he cannot obtain these things in the public schools, is the duty of the state to provide them elsewhere so that his happiness and usefulness may be increased.

When I say it is the duty of the state to do these things I speak advisedly for the state of Indiana, following the lead of seven states, assumed that obligation by legislative enactment in 1905 in the following words: "There shall be established in this state a Village for Epileptics, the object of which shall be the scientific treatment, education, employment and custody of epileptics. In the establishment of this institution the General Assembly recognizes the duty of the state to provide proper care for such of its citizens as are, or may become, affected with the disease of epilepsy."

That is the law. It should be a matter of state pride that public opinion in Indiana demanded this legislation within thirteen years of the establishment of the first separate institution for epileptics in this country.

The state recognizes its duty. No assumption of duty could be plainer. Note the order in which the objects of the institution are given: the scientific treatment, education, employment and custody of epileptics. The duty of the trustees and superintendent is here clearly set forth. Nothing could be plainer. Nothing remains but to secure appropriations to carry on the work.

The Village for Epileptics is located about two miles north of Newcastle on a beautiful tract of 1,337 acres. This tract extends approximately two miles east and west and one mile north and south. A river valley three-fourths of a mile in width extends from north to south. A range of hills, approximately seventy-five feet above the valley level, extends from north to south. Our plan is to use this valley in the separation of the sexes and to erect on either side of the valley three groups of buildings for patients. Thus, there will be six distinct groups of buildings, three for males and an equal number for females. The plans call for the erection of plain, simply constructed buildings and the units are small to aid in classification and to emphasize homelike features. The institution as planned will ultimately care for about 1,250 patients and has grown rather slowly to the present capacity of about 460 male patients. A

start has been made in each of the groups for male patients. No buildings for females have been erected. An appropriation of $275,000, made in 1919, is now available for that purpose. This appropriation as originally made was for twelve buildings, a certain amount for each building of a definite capacity each, and the increased cost of labor and material made it impossible to build. The recent special session of the General Assembly continued the appropriation with a provision that we should build and equip as many of the buildings as could be constructed within the appropriation. Plans are ready and work will begin early next spring.

In making requests for appropriations we have not failed to ask for those things that would enable us to carry out the intent of the law. The institution as planned will provide a hospital building and a separate receiving building for each sex, a medical building containing medical library, research, clinical and x-ray laboratories, postmortem room, clinic room and beds for patients under temporary observation. A school building and gymnasium for each sex and industrial buildings for each sex for occupational therapy have been planned and requested.

In a general way, it may be said that the General Assembly has been liberal in making appropriations for this institution.

It has been less difficult to get appropriations to increase the capacity of the institution than to extend its activities in other lines. For years we have asked for a hospital building on the male side, a school building and an industrial building for boys and the above mentioned medical or laboratory building. We are just now completing and equipping the hospital and industrial buildings, but have been unable so far to obtain appropriations for the medical and school buildings. This is unfortunate and is not in accord with the intent of the law.

Every patient committed to the Indiana Village for Epileptics is entitled to the best in diagnosis and treatment. Individual attention, education, congenial employment, opportunities and facilities for recreation, are his by right. These things are the salvation of the epileptic. He must be given new interests, new contacts and must be taught self control and consideration for others. An institution for epileptics should be a hive of industry and its atmosphere one of sympathy and friendliness. The mental and physical powers of the epileptic should not be overtaxed, but his time should be fully occupied. He must be kept from brooding over his condition. Classes in habit formation, manual training, and kindergarten work can do wonders for even a feeble-minded epileptic child. Chronic epileptics with a considerable degree of dementia can be taught cleanliness and self control and in some instances can be made useful members of the institution community.

So far the state is committed, but there are many epileptics in Indiana who will never be sent to the Village for Epileptics. The state should endeavor to do something for them. I believe that departments, under the control of the institution, should be established in the larger cities for the purpose of giving advice to epileptics and their friends. In this way the institution might be able to reach and favorably influence the lives of most of the epileptics in Indiana. It is quite possible that this work could be extended to such proportions as to surpass in importance the work done at the institution.

The points I desire to emphasize are as follows:

1. There should be close co-operation between the institution and the medical profession of the state. We need your constructive criticism and your support. You need the institution to help you work out your problems of the epileptic.

2. There is great need for careful research work in epilepsy.

3. An epileptic is not a normal individual plus epileptic seizures. Typically, he presents a definite make-up that unfits him for community life. In addition, many epileptics are feeble-minded or demented.

4. While there is great diversity of opinion as to the etiology, and the prognosis in any case must be extremely guarded, we know enough about the special needs of the epileptic to do much to alleviate his condition.

5. We may not agree with all that the psycho-analysts tell us in regard to epilepsy, but we are indebted to them for some brilliant contributions on the subject. Dr. Clark's conception of "the potential epileptic" should stimulate to earlier diagnosis and treatment.

6. State care for the epileptic is not a charity but a duty. In Indiana it is so declared by law.

7. There are more than five thousand epileptics in Indiana and about an equal number of families in which they exert a demoralizing influence. Therefore, epilepsy is a subject of prime importance to thirty or thirty-five thousand citizens of the state.

8. Proper care for many epileptics can best be provided in special public institutions designed for their peculiar needs. It cannot be accomplished without a liberal policy on the part of the state.

9. The Village for Epileptics has a wonderful site. It has made a good start. It has been greatly handicapped since 1917 by high cost of living and construction. The foundations have been broadly laid. It is now in a position to develop as it should.

10. The activities of the Village for Epileptics should be broadened to reach and influence the lives of epileptics who will never be committed to its care.

11. States, like individuals, sometimes make promises they are slow to keep. Public opinion in Indiana is in favor of proper state care for the epileptic, but it needs prodding when the General Assembly is in session.

THE SIGNIFICANCE OF EPILEPSY*

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The ultimate causes back of the phenomena of epilepsy are as cryptogenic as the causative factors of life itself, whose secrets have long defied the efforts of science. They are, perhaps, too fundamental ever to be grasped in their entirety by the finite mind of man. Yet we have faith that at bottom there is an explanation for this disorder, even though our knowledge at the present time extends scarcely below the surface of its true meaning. Such hopes are not entirely unwarranted, however, for we have the beginnings of this knowledge made in the various branches of medical science, but kept separate from each other for practical convenience sake. When we gather together this fragmentary information from all the various sources possible, we are able, not only to classify it, but seeing it in its proper relation, we gain a better understanding of the phenomena at hand.

The nature of this knowledge is forcefully brought forth when we consider some of the current explanations of the disorder and review some of the methods instituted for its relief. The field of surgery has been fertile ground where many of these theories have sprung up for a day. In the past, to relieve epilepsy, skulls have been opened to allow evil spirits to escape, while at the present time decompression is practiced to relieve increased intra-cranial pressure. The internal carotid artery is constricted for a similar reason and the brain is explored for the removal of tumor growths or scar tissue formations that are said to produce some special form of irritation which causes epileptic attacks. The head alone, however, does not suffer from such activity for almost every organ or part of the body has been excised or subjected to similar procedure with some such purpose in view. The bowels, for example, are often looked upon with great suspicion. Having an intestinal tract which quite often is the seat of various disorders, the epileptic is not only purged, dieted and given a good dose of worm medicine, but is just as apt to have his appendix removed or colon permanently opened to the outside world where it may be flushed and emptied at will. Almost every operation known, in fact, has been practiced for the relief of this condition.

Surgery alone, however, does not have a monopoly on the things said and done for the relief of epilepsy. Other branches of medicine as well contribute to our fund of knowledge of the subject. In the field of therapeutics, almost every drug known has, at some time or another, been recommended as a curative measure in this disorder. Bacteriology, with its rise to importance in the science of medicine, has offered more than one germ, each of which at the time discovered was thought to be the causative specific organism sought for. Pathological examinations of the brains of epileptics after death have revealed occasional different forms of lesions, including tumor growths, isolated placques of sclerosis, or degenerative changes in the cortical cells, each of which has been thought to have a particular bearing in this disorder. Abnormal physiological processes as evidenced in the epileptic have been the grounds upon which surgical and therapeutic measures have been based. Increased intra-cranial pressure has already been mentioned. Obstinate constipation, with a resultant intestinal toxemia and improper metabolism, are other conditions of this nature. Recently we are hearing much about endocrinic disturbances. Pituitary extract and other desicated internal secretory glands of animals are at the present time being fed with great favor. Perhaps, when this fad begins to wane, some enterprising surgeon from a remote corner of the earth will come to the rescue of the internist and cure epilepsy by breaking the vicious circle of plura-glandular disharmony through a successful transplantation of the gonads of a goat.

Limited space in an article of this kind prevents anything like a careful criticism, favorable or unfavorable, of the work mentioned. Of necessity, we must content ourselves with a hasty glance at the things supposed to have a bearing in this disorder. Among the conditions supposed to act as an exciting cause of epilepsy are: First, traumatism of various kinds, chief of which are injuries to the head such as may occur in serious accidents. The use of forceps at delivery is thought to offer an opportunity for such a mishap; second, irritation to any part of the body as may be seen in eye strain, chronic inflammatory condition of the nasal cavity, dentition, gastro-intestinal disorders, pelvic disease, phimosis, peripheral nerve lesions or just any

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condition which causes pain or irritation to the nervous system; third, organic lesions of a more general nature, such as arterio-sclerosis or cardio-vascular disease of any type; fourth, endogenous or exogenous toxines, of which alcoholism, lead poisoning and the like are examples of the latter; fifth, infectious diseases, including the acute exanthemata, influenza, cerebro-spinal meningitis, typhoid, malaria, diphtheria, tuberculosis and syphilis. Each of these conditions has been held responsible at some time for the disorder of epilepsy.

As an etiological factor of epilepsy, syphilis, however, is given little credence today as it is said to exist in but 2 to 3 percent of patients so afflicted. These figures, of course, are old ones based largely upon clinical findings. Recently, at the Indiana Village for Epileptics, a routine blood and spinal Wassermann test was begun on each patient. We are finding a much higher percentage of positive reactions than the above figures give. It has been said that the best and final test which will indicate the relationship of syphilis to epilepsy will be had when we observe the effect of intensive antisyphilitic treatment upon a series of our patients who are known to suffer from this specific disease. It is problematical, however, just to what extent we can stop seizures by arresting syphilis; for patients with the habit of epileptic convulsions firmly fixed seldom, if ever, are relieved from them for any considerable length of time through the cure of any accompanying disease. When we have completed the blood and spinal Wassermann work and have exhausted every means of investigation in the way of clinical histories and physical examinations with this end in view, we intend to report our findings. At the present time we are furnished with material for speculation only. We know that syphilis in the American army is said to have reached a mark of 16 percent in whites and 32 percent among colored troops. This causes us to wonder just to what extent lues is present in the general public. If we concede that it is very high, perhaps then we cannot consider it as an etiological factor of epilepsy, but rather that it occurs coincidental. Nevertheless, we must not lose sight of the fact that we are coming, more and more fully each day, to realize the growing importance of syphilis in mental disorders.

When we view epilepsy from this standpoint, namely, that of a disorder of the mind, we have opened to us a field of valuable information. It is not a new one, however, for Gowers long ago expressed the belief that worry and sudden fright had something to do with the disorder of epilepsy. Some recent investigators have attempted by psycho-analysis to determine the particular mental characteristics of the epileptic. They intentionally ignore physical disorders which the patient may have, not because they are unimportant, but because of the possibility of an independent but exact approach in a mental therapy of the disease.

By this analytic method the epileptic is found to be an individual with a particular but definite mental make-up which is characterized by supersensitiveness, ego-centricity, emotional poverty, retardation of thought, circumstantiality, a poverty of ideas, a lack of insight, an impairment of judgment, and an inability to make proper adaptations to environmental conditions. It is said that these mental symptoms may be detected in early life as the main tenets of these character defects are present long before the actual convulsions are manifested. Given a patient who is possessed with such a mental make-up, some "blank" in his character, supposed usually to be inherited, the individual shows an inability to make proper adjustments when life's handicaps are encountered. Confronted then with a physical or mental stress of a particular nature, the patient is said to go more or less unconsciously into fits to escape the situation with which he cannot cope.

Pushing this theory another step farther into the vagaries of mental processes, the fit reaction is explained to be comparable to the impulsive movements of an infant or more especially to the simpler ontogenetic type of activity as seen in the developing fœtus in utero whose incitors come from motor centres of the lower order. The life of the embryo in utero is often considered as a pleasureable state of being, since food, warmth and other needs are supplied by the mother's body without any striving on the part of the fœtus. Investigators, studying the mental content of the epileptic at the time of the attack or in the period immediately following, believe the convulsion and the unconscious state to be likewise pleasureable or contentful to certain sub-conscious strivings. This notion, together with the observation that the mental activity reached in the epileptic attack is from a lower brain level, has suggested the above explanation of the phenomena.

The chief object, however, of this study, as has been said, is not so much to establish a theory of the disorder as it is to gain a more scientific approach in the way of mental therapy, which in the past has been so neglected or handled in a haphazard and empiric manner. Of course a therapeutist of this school sets himself up as a psycho-analyst when he gets a patient and beginning to analyze, keeps on doing so until he finds the patient's blank—if not his bank—whereupon he must remove it by proper instruction to the patient or he must show him how to avoid in the future all situations with which he is not fitted and cannot be taught to cope. If, after all of this, the patient keeps on

having spells, it is his own fault and of course none at all of the psycho-analyst's.

Truly, the aphorism that, "Experience is fallacious, judgment difficult", as given to us by an ancient teacher, finds particular application when we study the subject of epilepsy. Clark, by an intensive study of the mental life of epileptics, has given us a character analysis and has perpetuated his work by its thoroughness and completeness. But when psycho-analysts attempt to explain the nature and meaning of the phenomena of epilepsy from the standpoint of purely psychogenic causes, they disregard the richer insight of modern neuro-psychology. Our mental life is purposeful, that is, our inner faculties are adapted in advance to features of the world in which we live so as to secure our safety and general welfare. To conceive of mental processes as exercising purpose by evading life's responsibilities is contrary to our ways of thinking. Even though we could change our ideas regarding purpose and concede that the mental processes of the epileptic act in a manner to evade life's conflicts, we cannot say that the escape to an infantile state of being brings pleasure and contentment. Let the regression be to the lowest level of motor excitation, whether it be an infantile state or that of the fœtus in utero, life exists there which means growth, a gradual but certain evolution from a lower to a higher type of organism. All of this comes about as the organism is able to make proper readjustments to changing conditions in its environment. If the epileptic type of mind is that of an intent to evade life's responsibilities, how can it find pleasure or contentment even in the lowest order of living organisms which obey the same laws of orderly purpose. Pleasure and contentment are had just insofar as we are able to successfully meet life's handicaps and it cannot be gained by regression. As far as our problem is concerned, we had better dismiss the notion that the mind functions as an entity all of its own and leave such thoughts to the dream of philosophers who may use them to advantage in particular problems of their own.

It is truly said, however, that out of old buildings, crumbled and fallen to the ground, there always is found good materials for building again. So it is incumbent upon us to sort and carefully select from ideas which at first inspection seemed a jumbled, unrelated mass. Surgical procedure, alone, as a means of relieving epilepsy we decry as fostering false hopes. Yet we must admit that a person so afflicted may have a surgical condition just as any other person may have and this condition may play an important part in the causation of seizures. Therapeutic measures we know have usually been futile and ineffective, yet bromides and luminal are very efficacious in decreasing the number and severity of convulsions. There is no pathological lesion known common to all afflicted with epilepsy. Nevertheless, pathological processes of any kind, wherever found, may act as a special form of irritation to the nervous system and a convulsion be a symptom of the process of the disease. Abnormal physiological processes as seen in our patient are often etiological factors of this disorder, yet the countless number mentioned weakens the degree of enthusiasm with which we accept any one of them. Anyone, however, who has made a great number of spinal punctures on epileptics knows that almost always the spinal fluid is under varying degrees of increased pressure. Again, we know of no specific toxine, exogenous or endogenous, which causes epilepsy, yet some such condition brings on convulsions in eclampsia, nephritis, strychnine poisoning, and chronic alcoholism. Likewise, intestinal intoxication, seen especially in children, is quite often accompanied by convulsions. Conditions of this kind are not looked upon as epilepsy, however, until they have reached a more or less degree of chronicity, yet the convulsive reaction seen here differs in no way from a single attack of epilepsy. So any process of disease of such a nature acts as an attack on the body as a living organism and as such will be resisted.

When we speak of the body as resisting processes of disease, we take cognizance, not only of a force behind such action, but of a force conscious of a need of that action and a force which must direct such activity. William James has said that, "All mental states are followed by bodily activity of some sort. They lead to unconscious changes in breathing, circulation, general muscular tension, and glandular or other visceral activity, even if they do not lead to conspicuous movements of muscles of voluntary life." Mental processes, whether they be instincts, inner feelings or any of our various ways of feeling or thinking, in this light become the motive power behind our activity.

If, then, we would know the significance of the phenomena of epilepsy, the syndrome of a partial or complete loss of consciousness, with or without convulsions and temporary or permanent physical and mental deterioration, if we get a better understanding of this phenomena, we must compare the functioning of the mind of an individual so afflicted to the mental life of a normal individual. A normal man, healthy in body, possesses mental powers which seldom fail him when needs present themselves. Because of his well ordered mind he can usually be expected to gain things needed. In case of unsurmountable difficulties, however, he is able to escape the dangers of too great mental stress by becoming interested in other matters.

The instances in which the normal man gives up trying when demands become too great are as many and as varied as there are interests in life. He cannot give up, however, by willing to do so. Such action can come about just insofar as he can entertain thoughts of a conflicting nature which tend to weaken strong mental states. Such action is possible where broad interests are had in life. The epileptic, sick in body as well as in mind, does not develop broad interests in life. His affliction causes him to live in a shut-in world of his own from which he cannot escape. When he develops strong emotional states, he has no avenue of escape from them, but labors on with every obstacle serving to aggravate his emotional drive to the point of an abnormal explosion.

Fatigue is the natural consequence of mental activity and it demands rest, which we get normally when we sleep at night. If, however, the mental work is of the nature of violent strain, such as is experienced in extreme emotional effort, an abnormal degree of fatigue or exhaustion is had which calls for an immediate cessation of function until a period of rest intervenes. This is what happens in the phenomena of epilepsy when the patient falls unconscious. The higher brain centres, which have to do with the directing and with the consciousness of efforts, become exhausted from over work when subjected to extreme nervous tension. The loss of consciousness is not deep enough to involve the motor centres, so the emotion goes on to an abnormal expression in muscular activity more or less unguided and unco-ordinated, which we know as a convulsive seizure.

In conclusion, then, we must look upon epilepsy as a manifestation of an individual's failure in life's orderly purpose. Because of bodily disease, which is not always easily detected, his mentality is weakened. In a person chronically afflicted with disease the epileptic convulsions become the individual's form of resentment against the attack on his welfare. The seizure itself is an abnormal muscular expression of strong emotional states. It is abnormal because it is effort which does not gain the purpose for which it is generated. It does not gain its purpose because of the partial or complete loss of consciousness which comes about when the higher brain centres which have to do with the directing of efforts become exhausted from over-activity.

DISCUSSION

DR. ALBERT E. STERNE (Indianapolis): While in recent years we have come to a somewhat better understanding of the mass of conditions which we group together and call the epilepsies, and while there is no question about the fact that the individual cases and the groups of cases gathered together in the institutions are far better treated than they used to be, nevertheless epilepsy remains one of the big medical mysteries just as it has always been.

Unquestionably a great many states associated with convulsive seizures and partial loss of consciousness, I am inclined to believe secondarily loss of consciousness, do not belong to the epilepsies. On the other hand if we exclude these from epilepsy we are taking a very dangerous ground, because these are, sometimes, the very cases which, if studied intensely and earnestly enough, will give us the most light on the causes of epilepsy. These are the cases which personally, individually, socially, present the revulsion against the condition in which that individual happens to live. It is frequently brought about by the letting loose of some repression, such as the Freudians like to talk about, in which the equivalent manifests itself, at times, by the convulsive seizures associated with the loss of consciousness. I have known such cases to occur without the loss of consciousness, or in which the convulsion is apt to be fraudulent, but I do not class such cases among the ones I have in mind when I speak of epilepsy.

Dr. Van Nuys is quite right when he says we speak of the general forms of epilepsy as those which show the periodic attacks, more or less frequently, with the intermittent periods of freedom, with more or less psychic or somatic attacks *ad interim*. It simply means that we are giving a name to things of which we are actually ignorant. On the other hand we are inclined to take out of the essential epilepsies those cases for which we think undoubtedly we find a cause, and by that very action indicate that we do not consider them epilepsy and that the genuine cases only represent a true entity. I do not think that is correct. We are just as little justified in considering the ordinary type any more a basic disease than the so-called symptomatic types. That we have epileptic seizures, veritable true seizures associated with the loss of consciousness, which are the result of pressure from neighboring areas is true, but it still remains an epilepsy and may furthermore become genuine epilepsy and remain an epilepsy even after the removal of, say, a brain tumor. It is by no means certain even in known cases of syphilis that the administration of anti-syphilitic treatment will prove successful in eliminating the epileptic phenomena. You may still find that the epileptic seizures continue just the same. I have been accustomed to believe that we are dealing with something far deeper in epilepsy

than the idea that it is a disease alone. There are two factors to be taken into our comprehension, I believe. One is a fundamental, probably congenital defect; an undue susceptibility of the nerve-cell functions, not only of motor type, but also of sensory and of the higher intellectual, with all of the characteristics that pertain to this higher intellectual sphere. There is something fundamentally wrong with the individual who becomes an epileptic. Let me illustrate what I mean. All children who live long enough develop teeth. Only a very small percentage of children during the teething period develop epileptic seizures, however. Yet we are prone to say that it is the teething which is responsible for the epileptic phenomena. Could any conception be more wrong than that? Teething is a perfectly normal process through which millions and millions of children pass and never undergo any epileptic seizures. Therefore, there must be some fundamental defect in the make-up of the child who develops epileptic seizures during teething. Neither need the teething in itself be abnormal. It may be perfectly normal and yet that child manifest epileptic seizures, and not only once in a while, but frequently. The history of epilepsy—and I think the doctors will corroborate this statement—is that the majority of epileptics manifest attacks in early infancy. There may have been a span of years, or many years, of freedom after the teething period has passed. Then comes another period at adolescence, or close to adolescence, at which epilepsy is prone again to manifest itself, then there may ensue a period of freedom, and another phase manifest itself after many years and, once more, epileptic or epileptoid symptoms show themselves. All along we note this fundamental factor of nervous instability. We call it "nervous instability" for want of a better name. These individuals are fundamentally wrong from the start. If factors develop in these patients which have a strong influence on the nervous system, these individuals are far more apt to manifest epileptic explosions. Only a small percentage of luetic individuals present any epileptic phenomena. The pathology of epilepsy, as the essayists have said, so far as we are aware, is unknown. The same pathology will be met with in the brains of individuals who have shown a chronic process for many years, who, during life, had no epileptic seizures. I believe that Dr. Marsh has cited a group of epileptics to which more attention should be given than has hitherto been done. I wish to emphasize that. If we, as physicians, wish to have any success in this, to me the biggest problem in medicine —bigger than the cancer or tuberculosis problems in my estimation, because they both mean death while epilepsy means a living death to the individuals, the destruction of family groups, and has a social side which the other two do not possess—we must continue to study it intensively.

Speaking on the question of heredity, I have been impressed for a great many years with the fact that we are talking entirely too glibly about the matter of heredity. True heredity must encompass the idea that the earliest union of spermatozoon with ovum is the organism acted upon. If you have a disease malignant enough, vicious enough, to infect that impregnated ovum, *early,* then the concept that that impregnation will remain viable is almost impossible to entertain. In cases of true hereditary disease we find early abortions almost invariably, as, for instance, in syphilis. On the other hand, a child of syphilitic parents may be born viable, but with a *congenital* disease and not an hereditary disease. Disease has been conveyed to the fœtus after it has attained a state of development where viability is possible. Therefore, we must sharply define what we consider *true heredity* from conditions which are truly congenital. I believe that true hereditary diseases are very, very rare. I know of quite a number of congenital diseases, of which syphilis is the most common. We find many children born with evidences of having undergone some infection *in utero* from the mother. There are many instances of that, but that child must have been viable when it attained that disease, otherwise it would have aborted. The investigations of Warthin, who has found the spirocheta pallida in almost every tissue of the body, including the brain, in individuals who during life had never given any evidence of syphilis, or any laboratory evidence thereof, indicate that it is possible for germs to lie dormant in the body for a great length of time and even never show any syndrome during life. It is beyond question that we are dealing with some such thing in the conditions which we are discussing here this afternoon. Like Dr. Van Nuys, I have passed through various cycles. There have been times when I felt that I knew something about epilepsy. Now I know that I know very little. I manage cases better than I used to, because I fight more and judge every case individually. Each case must be considered separately and managed in such a way as will meet the indications, but so far as knowing anything about the genuine malady, I know as little as did Susrati two thousand years before Christ.

DR. JOHN HURTY (Indianapolis): I would like to ask Dr. Van Nuys if there is any prospect of the prevention of epilepsy. Dr. Sterne has said it is a fundamental neuro-defect. How may neuro-defectiveness be removed by other method than the control of heredity? I do not think

anything was said about the heredity features and I would like to know whether this has been investigated, whether epilepsy is supposed to be hereditary and what the chances are for prevention.

Here is a fundamental: When conception takes place the gate of gifts is closed absolutely. And another fundamental: A sanitary problem cannot be solved by caring for the victims of insanitation. I do not believe disease is hereditary, but we know that unstable nervous tissues may be inherited, which is another thing, and then disease is expressed in numerous ways: epilepsy, insanity, tuberculosis. Syphilis is protean in its qualities, and I think we will eventually find out that a strong man makes for success and education and brings things about. He does not need to be cared for, he cares for others, and we all do that in the degree that we have inherited the ability to make our own environment.

DR. WALTER D. HOSKINS (Indianapolis): I would like to ask whether there is anything to show that insanitary feeding, intemperance, undernourishment, and early home influence is a factor in the causation of this disease.

DR. CHESTER A. MARSH (closing): Dr. Sterne has truly said that the best we can do in our study of epilepsy is to throw side-lights on the subject. It is like all other subjects in medicine in that we do not know all there is to be known about them. There are many who believe that at bottom there is but one science of all things medical and that until all is known, no one thing can be completely known. But we are far from realizing such a science in medicine. Medical science is not an exact science, but has its beginnings of knowledge made in many different places. Epilepsy being a medical problem, is best understood, then, when we gather and carefully consider information pertaining to it from every possible source. The ultimate explanation, however, of a process of disease of this kind, which involves the very principles of life itself, of which we know so little, is at present beyond our powers of comprehension.

Although it seems too deep to be solved, it is interesting to observe the attitude of different minds towards it. Open-mindedness in dealing with it is hard to maintain. Over-enthusiasm is seen in the eagerness of the medical profession to accept for a time theories and cures only to discard them later when they are found to be of limited importance. From the unfruitful experience of having based treatment upon advice of such a doubtful nature, it is to be expected that we should find some physicians who view the problem with extreme conservatism. Any effort to explain the disorder, by those taking such a position, however, does not extend further than vague generalizations which, although they cannot be denied, do not add anything to our knowledge of the subject. Dr. Hurty brings up the matter of heredity in epilepsy. We have all seen charts, large enough to cover these walls, marked off into circles showing inherited tendencies of degeneracy—feeble-mindedness, insanity, suicide, criminality, etc. Do we gain any knowledge of a strictly medical nature from them? What causal relationship is established? Is it enough to say, "Oh, he inherits that from his defective ancestors?" Such assertions are comparable to attempted explanations of certain phenomena of nature about us where it is said, "Oh, that is natural" without showing the physical factors which produce them.

Dr. Sterne has spoken of an inherent cortical instability as manifested in the epileptic. The notion is not a new one for it occasionally appears in medical literature. It is true that the conception is cloaked in medical parlance, but our patient often tells us as much in his own simple language when he says that he is "off in the head," "that he was made wrong". We cannot deny that such an instability is present, but the bare assertion of the fact calls for a further explanation of it and it is not had where a claim is made of a growing realization of an inability to understand the disorder.

Recent advances made in many branches of medical research have made it possible for us to have a better insight into the phenomena of epilepsy This, however, has not all come about without the abandonment of positions which once offered hopes of a solution of the problem. We have seen for example that surgical operations are no longer fashionable for the relief of epilepsy. A more recent position no longer tenable, but one always held to be more or less radical, is the psycho-genic theory of epilepsy. Abnormal mental processes are seen in the phenomena of epilepsy, but their analysis and explanation barely scratch the surface of the true meaning of the disorder. Physical health is the measure of mental health and our ability to understand epilepsy is dependent not only upon psychological analysis of abnormal mental symptoms, but upon a correct diagnosis of somatic disorders as well.

DR. W. C. VAN NUYS (closing): I have little faith in the bacillus of epilepsy, but I sometimes think that a germ of some kind infects the brain of the student of epilepsy. Eighteen years ago I thought I knew something about epilepsy. However, I have known less about it each succeeding year. At any rate, I can safely say that I have discarded most of the

opinions I held at that time and that I now have very few fixed opinions about epilepsy.

I want to say that for fourteen years I have been reading occasional papers on epilepsy, and each time Dr. Hurty gets up and says "What are you going to do to prevent it?" I knew he would do so today. I wish I could give him a satisfactory answer. As far as heredity in epilepsy is concerned I believe we are thinking less about it than we did some years ago. Just why I do not know, except that it seems to get us nowhere. One reason, perhaps, is that comparatively few epileptics have epileptic parents or grandparents, and if they do their chances for improvement or recovery do not seem to be lessened thereby. I am of the opinion that alcoholism, and especially syphilis, are at the bottom of most cases of epilepsy.

THE PHYSICIAN

THOUGHTLESS PROFESSIONAL CONDUCT AND SPEECH*

BY

FRANK B. WYNN

INDIANAPOLIS

In our own time the practical application of laboratory revelations has given to medicine an overweening trend toward materialism. We have come to reckon things medical by structure, bacterial growth, chemical reaction or mechanical adjustment. It is a focal, special, material thing upon which the eyes are centered and action based. The eternal quest is for pathology and its eradication by mechanical or specific measures. Long trained to search for specific and material causes of disease (and with amazing benefit to medical progress!) we have come to forget or doubt the role of mental, moral and spiritual agencies in the production or relief of morbid states of the mind and body. Under a separate article these subjects will be considered more fully. At this time it is only intended to call attention to some of the unsuspected shortcomings of physicians; what may be characterized as the sins of thoughtless speech and conduct. In the treatment of this subject it is hoped to escape the charge of being a carping critic. Let my appeal be viewed rather as an exhortation against thoughtless professional methods or unguarded language capable of misinterpretation by the patient to his own detriment.

Negative sin, that is failure to perform obvious duty, does not excuse the physician from guilt. Commendable aggressiveness in one direction sometimes leads to oversight of errors in another direction. The very fact that the medical profession holds a position of high respect in society places large responsibility upon the physician. This makes it a bounden duty for him to measure well his every word and act. Loose medical talk may count for but little at the time, but in its ultimate effect bring disastrous consequences—to the patient, and the community, reflecting discredit upon the profession.

Themselves human, physicians are not rarely given to the human weakness of gossip about cases. The doctor is constantly besieged with inquiries about the sick. As an evidence of sympathetic concern they bespeak a commendable fraternal spirit. But how is he to know they are not prompted by an unfriendly curiosity which thoughtless conduct may gratify? Hence it were the part of wisdom to maintain an attitude of reserve, stating guardedly only such facts as the public may know without violation of one's confidential relations to the patient. Few indeed are the physicians who violate these traditional obligations. Yet the gossip monger is occasionally found in professional ranks, peddling from house to house the stories of cases and experiences. Such narratives may afford entertainment, but they take from the dignity of professional conduct. It is a temptation to which most of us yield at one time or another; occasionally pardonable, but always fraught with danger. The gossiping habit once established is not only reprehensible but deplorable for the physician himself, since the community will soon come to judge him with distrust. Even the law takes cognizance of our obligation to secrecy in professional matters. The confidence reposed in us should never be abused.

Akin to the gossiping evil is tattling to the press. The newspaper appeal proves a flattering temptation which it is difficult to resist. The persistent and prying reporter almost forces the physician to embarrassing admissions by threatening public announcements about patients which will be even more humiliating. A plain statement of the facts consistent with the rights of the patient is probably best in most cases, with a courteous request that the physician be not humiliated by parading his name in connection with the case.

It is astonishing how many laymen consult the physician with preconceived convictions as to the localization and nature of the malady from which they are suffering. They may not come for a diagnosis but with the request for a prescription for a named disorder. Their meager knowledge of the human body, its functions and morbid manifestations, excuses to some extent their shortsightedness.

The layman who asks for a headache remedy is not presumed to know that pain in the head

*Tenth of a series of articles by Dr. Wynn which will appear regularly in THE JOURNAL.

is only a symptom which may arise from a dozen different causes, remote from the seat of pain and requiring as many different methods for its relief. He is not to be condemned for his failure to grasp the largeness of the problem. But what shall we say of the physician who accepts this self-made, symptomatic diagnosis and prescribes a stock remedy for headache?

Of all symptoms brought to the general practitioner for attention, none rivals in frequency those referable to the gastro-intestinal apparatus. To the layman's mind these naturally suggest the existence of stomach disorder. As an introduction to the story of his complaint he is very likely to state that he comes to receive treatment for "stomach trouble". How alluring is the temptation to fall in with the patient's self-made diagnosis and institute the routine treatment for such conditions! Diagnostic suggestions of this kind, coming from laymen, should always bring instantly to the practitioner's mind the well-proved clinical fact that organic stomach disorders are rare as compared to the relatively greater frequency of stomach symptoms arising from nervous or remote physical causes. Culpable indeed is the physician who permits himsefl to be led blandly into error by the patient's ignorance or still worse by his own inadequate investigation of remote pathologic conditions likely to give rise to stomach symptoms. Self-made diagnosis is dangerous for the patient; its acceptance by the physician is a gross reflection upon his professional intelligence and skill. His business is to find out the truth; not blindly to be led. It is for us as painstaking diagnosticians to show that some of the cases of so-called "stomach trouble" are really incipient pulmonary tuberculosis; many are pure neuroses; others represent the toxemia of nephritis; still others are clear-cut cases of gall-bladder disease or appendicitis.

Again and again the druggist has been arraigned for prescribing over the counter—a most reprehensible practice, which cannot be too strongly condemned. But whilst casting the lance of criticism at him, let us not out of carelessness of habit or from haste to encompass large business, be guilty of the same superficial and dishonest practice. Our duty is to hearken patiently to the patient's narrative of his complaint; add thereto from painstaking personal inquiry; make such careful observation and investigation as circumstances will permit; and lastly weigh all the data upon which to base judgment in diagnosis and management. Any other course falls short of one's full duty as a physician worthy of the calling.

Of the body functions none is more frequently disturbed than that of urination. To the lay mind this deviation becomes a source of annoyance calling for medical counsel. Common observation reveals that exposure to lowering temperature may produce marked polyuria, as will tense or harassing mental anxiety produce the same symptom. Small water intake and animal diet plus condiments and stimulants may develop burning on urination. Extreme obstipation or a severe "cold" may give rise to mild cystitis with frequency of micturition. When the physician is consulted for such minor disturbances he is quite likely to assure the patient that it is only a transient difficulty, adding that it is just a "little kidney trouble" which will yield quickly under the treatment advised. This seems plausible to the patient and he goes his way with hope and satisfaction, making quick recovery. Whilst the physician consulted knew perfectly well the difficulty complained of was not "kidney trouble" at all, he salves his conscience with the reflection that it is not necessary to explain fully to the patient the nature of such minor ills, especially since time and treatment will soon work the cure. What harm therefore if he speaks thus loosely in a diagnostic sense? Why worry? The explanation satisfies the patient. The injury comes later, when the patient perhaps consults some other physician and the latter remarks bluntly: "Why you have no 'kidney trouble!'" Thus doctors come to misunderstand each other. Or let this same patient go his way with the impression that he has "a little kidney trouble," until he makes application for life insurance. If he answers truthfully about what the former physician told him he is very likely to suffer a rejection. Or again let us suppose that years subsequent to the early experience, symptoms again appear in the urinary tract. A careful examining physician may be completely thrown awry in his diagnostic judgment as to whether the present trouble is acute, recurrent or chronic.

Akin to the foregoing laxness of diagnostic expression is another phrase even more deleterious in its influence—"heart trouble." Patients have come to use the terms without proper discrimination as between functional and organic disturbance of the heart. Let us beware lest we are at times guilty of the same looseness of distinction. Recently the writer sat at luncheon in the midst of a group of distinguished internists, when a well-known heart specialist spoke at some length his convictions on this subject. He stated that it was astonishing how many persons consulted him for "heart trouble" who did not have organic heart disease at all. He did not so much allege failure of diagnostic skill on the part of physicians as a lack of accuracy in diagnostic expression. Neuroses, gastric, intestinal and other toxemias associated with heart

disturbance, were loosely referred to in the presence of the patient as heart trouble. Inaccuracy of diagnosis in such cases is of course deplorable. Not less reprehensible is that carelessness of speech which burdens for life the mind of the patient with the thought that he has heart disease. Forever before his mind's eye is hung the warning sign. Fear haunts his prospects in life, puts a brake on his energies, and curtails his activity in the open—the very thing perhaps which the patient needs most of all.

The scientific advancement of recent years has schooled physicians well concerning the relation of bacteria to disease production. Practical application of this knowledge has enabled wonderful progress in the prevention of infectious maladies. Equally commendable advancement has not been made in the prevention of the rapidly increasing neuroses and psychoses. Yet this vast army of chronic sufferers may be greatly reduced, many of them prevented, by applying at the proper time the laws of mental hygiene.

It is not designed here to discuss the large problem of the psychogenic causation of the functional disorders, except as related to the sexual sphere. However much, by parental care, education and religion, effort may be made to hold within bound the sexual impulse—its dynamic assertiveness remains as strong as the desire for food or even the laws of life itself. The sexual sphere is that about which most of the phobias cluster. They constitute a large contingent of the practitioner's clientele—a long-suffering, moody, harrassing group. The purpose of this discussion is to try to show that the physician may be responsible in part for the development of this lamentable psychosis.

Proof of this statement is offered in the brochure of the quack, which reeks with insinuating and suggestive appeal to the sexual realm. If this conscienceless practitioner can but succeed in getting the impressionable individual to read his sex literature, the vile current is at once established which pours blood-money into his coffers. This is wanton and aggressive professional sin for which no words of condemnation are too strong. If the brazen charlatan may, by evil suggestion, so prey upon credulous individuals is it not possible that decent practitioners, too, may unwittingly, by looseness of speech contribute to such an unfortunate state of mind? How important, therefore, in the diagnosis and treatment of any disorder of the sexual system, in man or woman, that every act and every word be measured by thoroughness and care. If positive lesions are found to exist they should of course be treated by the most approved methods. On the other hand indefinite, subjective phenomena without discoverable lesion call for the utmost caution in diagnostic opinion or treatment, which may fix the attention upon the sexual system.

The woman of neurotic heredity, neurasthenic complex, and indefinite pelvic symptoms, who is told, even in the absence of discoverable lesions, that she has "womb" or "ovarian" trouble has had put upon her a psychogenic burden harder to bear and more difficult to throw off than physical conditions which later study may reveal. These truths come often to the knowledge of the neurologist.

To the urologist no case proves more refractory to treatment or more vexatious to patience than the sexual neurasthenic—with or without discoverable lesion. Careful investigation of the history will generally show: First, a neurotic heredity; next, an early indiscretion or minor infection; then the reading of suggestive, quack literature; fourth, treatment from time to time by various practitioners—all influences directing the thought of the patient into the same stream which flows into the dismal-swamp of sexual fear. Do not these facts put upon us a tremendous responsibility in diagnostic determination and therapeutic management in these patients? It is not of course contended that the average practitioner is guilty of the same wanton design as the quack in feeding morbid mental tendencies and nursing these cases for mercenary ends. If there be such they are not entitled to march in the ranks of decent practitioners. Their place is rightfully in the company of charlatans. The appeal here made is to the honest and fair-minded practitioner that he be not guilty of the sin of thoughtless speech or conduct in these cases.

Within the category under discussion is syphiliphobia. It is not an uncommon experience with careful and conscientious urologists to reach the conclusion that a considerable number of these sufferers have never had syphilis. In such, a negative Wassermann and personal history fail to give clinical evidence of the luetic nature of the original infection. If error was made by the practitioner in such a case, it will often be found that he allowed his best judgment to be swayed by the importunity of the mentally distressed patient. The latter, impelled by fear of consequences, appealed strongly for immediate action. He was not content to wait for certitude in diagnosis. He reasoned thus: "You say this may or may not be syphilis; that time alone will clear up the diagnosis as the disease undergoes evolution. The latter is just what I want to avoid. I am thinking of the effect on my whole life and progeny. Can you not nip the thing in the bud and prevent subsequent ravages? I prefer to play safe and have you to institute at once antisyphilitic measures." And so it was done. The patient never afterward developed convicting evidence of luetic

disease, but he was never able to shake off the fear of an outbreak. The flame of anxiety is kindled by every pimple, pain or physical discomfort. In very recent times, of course, serologic diagnosis is most helpful in lifting the cloud of doubt. The point of all these references is that the physician is shortsighted and falls short of duty who does not determine absolute diagnosis in these cases. Any other course is unfair to the patient and on the part of the physician amounts to contributary negligence.

Let the closing thought of this critique be the oft-repeated sentiment that we should never stray from the conception of medicine as a profession and not a trade. Neither the materialism of the age, its obtruding commercialism with the ambition for big business, nor its confusing stresses or insistent demands, should divert us from the straight and narrow path of professional rectitude. In the journey, accordingly, we should avoid the by-paths of thoughtless acts and careless speech which lead both patient and physician astray.

DOCTORS AS "EASY MARKS"

Anent the subject of doctors as "easy marks" in the matter of foolish investments, the following editorial in the February number of *Clinical Medicine* leaves nothing unsaid:

"Goat Feathers." It occurs to us to wonder whether doctors ever collect goat feathers, as is so humorously described by Ellis Parker Butler in that skit with the droll title. Are we medical men ever made "the goat", as the slang term goes?

When you bought that set of books, doctor, in 24 volumes by Professor E. Scribbles Wrott, didn't you add a few feathers to your collection? The glib-tongued agent with his prospectus skillfully concealed under his coat (perhaps it was a "her") had run the gauntlet of the office girl and gained entrance to your sanctum, and had set going his (or her) lingual victrola, until you weakly yielded and signed your name on the dotted line, binding yourself and your heirs forever, to a dollar down and a dollar a month through all eternity, world without end. Then, every time the collector came around, how you hated yourself and called yourself 24 kinds of a fool. Yes, you added a few goat feathers to your collection that time, 24 of them.

Then, doctor, haven't you got, hidden away in a secret drawer, where not even your wife ever saw them, a few beautiful gilt and illuminated stock certificates of the Silliman Oil Company down in Texico near Mexas that was boring gushers and making a new crop of millionaires every 30 days? You remember what visions of wealth romped around in your brain for a little while after the visit of the genial promoter, who was willing to let you in on the ground floor because he had heard of you as a regular fellow from a banker in St. Louis, who had said to him just before he left there: "When you get to Chicago, be sure to call on my old friend Dr. ——— (there, I came within an ace of writing my own name down). This is such a good thing that we must have him with us." And, you are still waiting for the dividends.

But, if you want enough for a feather bed, we can tell you where to find them. Get out that pile of old ledgers from the closet, brush off the dust, leaf through them, and look at all the accounts that on the credit side are just clean, white paper. Think of those families that called you the best doctor in this city, until the time came to pay the bill, and, then, they told the neighbors that you had nearly killed little Johnnie, and that they had dismissed you just in time.

Then, there are lots of accounts that would have been perfectly good if you had sent out your bills on time and pushed their collection just like a regular business man. But, you were afraid of offending a good family and let an excellent account slide along until it was a "dead horse". Finally they moved away and that was the end. Who was the goat that time?

Do you remember the time you did that operation, and sent the patient a bill for $25? And, when he came in to pay it, he said: "I was pleasantly surprised, doctor; I expected it would be at least $50." You looked foolish, and stammered something about "live and let live"; but when he was gone, you kicked yourself all around the room. Ma-a-a!

How about that time when a strange family engaged you for an obstetric case and you were too timid to demand a retaining fee? You stayed at home from everything you wanted to go to, for fear you would miss it. Then when weeks had passed without your hearing from them, you called to see what was the matter, and found it was all over long ago. They had called another doctor on the washerwoman's recommendation. You went home mad and resolved that in the future every stranger would have to plank down an X as a retainer. Goat? Why, you could fairly smell yourself. You had an odor louder than the billy staked out on the vacant lot next your house.

No, no, we shall tell Ellis Parker Butler that he may be right in claiming that "pigs is pigs", but we know that "goats is goats", and that the doctors can give the author pointers when it comes to gathering the feathers.

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EDITORIALS

EPIDEMIC HICCUP

In commenting on the epidemic of hiccup which seems to be prevalent in Europe and this country, the *Journal of the American Medical Association,* January 22, 1921, has the following to say: This disturbance is usually the subject of humor rather than of medical concern, and it is seldom given the serious attention which it probably merits. Pathologically it seems to be associated with irritation of the phrenic nerve, from gastro-intestinal disturbance, from neuroses, or from remote disturbances of the central nervous system not as yet determined. The irritation may be of peripheral or central origin. In pneumonia or typhoid fever, hiccup, perhaps due primarily to the effects of bacterial toxins, may be a serious complicating factor, even causing death. Unless hiccup persists for an undue length of time, preventing the patient from securing rest or from continuing his ordinary occupation, it attracts little notice. However, in the epidemic through which we now seem to be passing, many cases have occurred in which patients hiccuped as frequently as every three or four seconds for periods of a week or longer. Lhermitte points out that the first appearance of the epidemic of which he knows occurred in Vienna in the winter of 1919-1920, and was reported by Economo. Large numbers of persons were suddenly attacked with uncontrollable and almost incessant hiccup rebellious to all treatment. In most instances the disturbances ceased spontaneously in a few days, although in one case the hiccup persisted for a month, the patient having only a few hours of rest each day. The hiccup seems to have been associated with the outbreak of epidemic encephalitis, and it is Lhermitte's belief that the association of such epidemics with epidemics of lethargic encephalitis indicates a causal connection. He states that five well-known French clinicians, including Netter, are in accord with this belief. Although epidemics of hiccup have been reported for centuries, there is no specific or even effective treatment.

Two methods of treatment have been suggested, the first attempting to reduce the hyperexcitability of the medulla, the spinal cord and the phrenic nerve through the use of sedative and narcotic drugs, and the second attempting to exert an inhibitive influence by physical measures on the nerve centers in reflex erethism. The number of these physical measures is legion. They include pressure on the spine (Nothnagel, Rethy), compression of the arms (Piretti), pressure on the ulnar nerve (Pauzot), pressure on the eyeballs (Sicard and Paraf), influencing the diaphragm by forcible flexion of the legs (Jodicke) or by an apparatus (Boyer, Rostan), distension of the esophagus by swallowing a chunk of bread or something similar (Sicard and Paraf), distention of the stomach (Kanngiesser), icebag to the stomach region (Eloy), direct compression of the phrenic nerve against the scalenus muscle (Leloir, Grognot), faradization of phrenic nerves (Dumontpallier) and traction on the tongue (P. Lepine). All of these measures have failed in some cases, and their chief recommendation is that sometimes they seem to be effective and that in general they are harmless. The significant fact brought out is that there may be a relationship between epidemics of encephalitis and of hiccup. This point merits more thorough investigation.

THE STATE FAILS

A child suddenly falls ill. The malady is strange; physicians who are called give the disease a name, and tell the parents that any relief which science affords is only palliative and not curative, and that body forces frequently overcome the disease. The condition is actually encephalitis, an inflammation of the brain. As with other diseases affecting the nervous system, there ensue excitation, delirium, fever and twitching of the arms and legs. The parents are anxious and wish to do everything that is humanly possible. It is not surprising, therefore, that they accept the services of a pretender to scientific knowledge. They know no anatomy or physiology; they cannot judge between the true and the false; they know only that their child is sick and that a man who is permitted by the state to practice the healing art is offering them aid. They accept. How many parents would not? The chiropractor administers his treatment. Gradual remission of the symptoms ultimately occurs. The parents are overjoyed. In the first flush of their happiness, they write glowing testimonials to the chiropractor's ability. A miracle has been worked! The sensational press is furnished with "live" material. Sunday "feature pages" carry columns of write-ups and pictures and incidentally—or is it incidental—whole pages of advertisements of practitioners of the pretending science. "One hand washes the other." Then it is discovered that the miraculous cure

was not a cure, that the treatments have in fact been so painful that the child's condition is possibly worse; that the chiropractor has been relieved of attendance, and that the child resents his muscular ministrations. Does the press give the public these facts? Do the advertisements cease? Not at all. What of the parents and the child? To whom shall they look? Whose duty was it to protect them against ignorance and incompetence? "The first duty of the state," says Disraeli, "is the care of the public health." When the state permits those with no scientific knowledge, who know nothing of physiology, of anatomy, of pathology, of infection or immunity to treat disease—no matter what the method employed—the state fails in its duty.—*Jour. of the Amer. Med. Assoc.*, March 5, 1921.

MEDICAL FACTS AND CHIROPRACTIC FICTION

Throughout the length and breadth of the country there has recently been heralded an alleged marvelous cure of what the newspapers have been pleased to call "talking sickness". Not only have the newspapers made sensational stories out of it, but the chiropractors have used it as a basis for flaming newspaper advertisements extolling the virtues of their cult. Reading these news articles and advertisements one learns that an 8-year-old child was suffering from a "strange talking malady" that was so remarkable that "specialists from all parts of the country were interested in her case". Further, one learns that "every form of sedative had been administered without improvement", and "all the medical physicians and consulting specialists whose services were tendered" failed to bring relief. Finally, a chiropractor "pleaded for the opportunity to save the child and gained consent of the parents". In a "few moments" the chiropractor "adjusted" the "second and fifth vertebræ", and "the talking stopped"! And, continued the full page advertisements, in very large and very black type: "She Has Completely Recovered and Is as Healthy and Happy as You." So much for the fiction. It made a good newspaper story, especially for those newspapers that saw in it the opportunity to suggest to the chiropractor fraternity that, as their business had been given a magnificent boost in the news columns, it was highly desirable that they should add to this free advertising momentum an additional urge through the pages. Rate card enclosed. What are the facts? Briefly these: That the child did not suffer from so-called "talking sickness"; that the alleged adjustment of the spine did not "cure" the "sickness" and, finally, that the child has not "completely recovered", but is still dangerously ill. The case was one of epidemic encephalitis, with a temperature ranging between 99 and 103 and active delirium, inequality of the pupils and strabismus. The improvement was gradual and that incident to the ordinarily observed progress of the disease. As shown by the case record, the chiropractor's "treatment" did not modify the course of the disease. The "talking" had ceased at intervals previous to his visit and continued at intervals after his "treatment". But the publicity given the case offered great opportunities for advertising and, as advertising is an important part of the chiropractic curriculum, it is but natural that this cult should take advantage of it.—*The Jour. of the Amer. Med. Assoc.*, March 5, 1921.

MEDICAL DEFENSE BY THE ASSOCIATION

The Indiana State Medical Association has furnished medical defense for its members since the year 1912, but throughout the time that this feature has been in operation there has been considerable misunderstanding on the part of many members as to just how it is obtained and conducted. This misunderstanding has been due to the fact that few members have read the By-Laws of the Association which covers the medical defense feature, and even secretaries of county medical societies, who should be familiar with the By-Laws, are unable to furnish any reliable information when asked to give assistance to a member who has been threatened with prosecution. Therefore, for the benefit of all the members of the Association we are reproducing from the By-Laws the salient points of the medical defense feature.

Briefly stated the Association will not undertake the defense of a member who has failed to pay his annual dues prior to the rendering of services which are the bases of the suit. Neither will the Association defend a member who is not in good standing in the Association, which in fact means that defense will not be provided those who are delinquent in the payment of dues or suspended from membership for any reason whatsoever. The dues are payable on January 1 and become delinquent on January 1 of each year. The membership card of the Association, duly signed and dated by the secretary, is considered the only bona fide evidence of payment of dues or membership in the Association. The liability of the Association includes only the expenses necessary for the legal defense of its members and not damages awarded.

Concerning the manner of making application for medical defense, the rules as laid down by the By-Laws are as follows: A member desiring to avail himself of the services of the Committee on Medical Defense in connection with

litigation brought or threatened must first submit to a local committee of his county medical society—to be composed of the President, Secretary and one other member in good standing who may be nominated by the defendant—a full statement of the question at issue, including the diagnosis and treatment of the case and the names of physicians, nurses and other persons having knowledge of the same, who may be summoned as witnesses. The committee of the county medical society shall immediately after an investigation of all the circumstances and facts, transmit its report, with recommendations, to the Committee on Medical Defense of the Association. Accompanying such report from the county society, if favoring medical defense by the Association, there must also be furnished the written authority of the defendant granting to the Medical Defense Committee of the Association full power to act in his behalf, and an agreement that his case shall not be compromised or settled without the consent of a majority of the Committee on Medical Defense. In the event that the county committee shall fail to recommend the case as one worthy of the recognition of the Association, a direct appeal may be made to the Committee on Medical Defense of the Association, whose decision shall be final. Suits brought against the estate of a deceased member shall be defended as if that member were alive; provided, that such member was in good standing in the Association at the time of his death and that services for which indemnity is asked were rendered while the deceased was a member in good standing.

Each member of the Committee on Medical Defense of the Association is entitled to an honorarium of $10 per diem for services actually rendered while at home, and $30 per diem, with traveling expenses, if required to go out of town in the investigation of any case or in attendance at court, and these same fees shall be allowed to expert witnesses under similar circumstances.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

AN Actual Occurrence in a Chiropractor's Office:

Patient, "I have been told by regular doctors that I have a leakage of the heart."

Chiropractor, "That is nonsense. A leakage of the heart is an impossibility. Where would the leakage go to?"

WE wonder how many doctors who in advertising the fact that they have just returned from a two weeks' post-graduate course at Dr. Cutem's Clinic are not in reality advertising Dr. Cutem more than themselves. Why kick because people go to distant clinics, sometimes for trivial medical or surgical attention, when the greatest advertisers for those clinics are the doctors who let it be publicly known that their instruction and experience has come from those clinics? Very naturally a certain number of people are of the opinion that it is the proper thing to go to the fountain head.

THE free venereal clinic as at present conducted in many cities does not deserve the support of the regular medical profession. It antagonizes medical men and it pauperizes the community by making it possible for the well-to-do to secure something for which they ought to pay a reasonable fee. When conducted properly the free venereal clinic is of great value to any community, but its operation should be regulated in order to meet with the encouragement and support of all right minded members of the regular medical profession.

MEMBERSHIP dues came in very well during the month of January and there have been a few stragglers during February. There are a few delinquents who, as a result of delinquency, have been suspended from membership and are deprived of all of the benefits of our association. They must be reinstated in order to be in good standing. In the meantime, if those delinquents happen to render services for which they are sued for malpractice, the association does not defend them. In a few instances the failure to keep up membership in the association has been a costly experience through failure to secure the association's medical defense in malpractice suits.

The American Legion Weekly has adopted an advertising policy against all misleading, fraudulent and immoral advertising which is admirable, and might well be followed by all newspapers, magazines and other periodicals. They make the statement that the advertising columns of the *Legion Weekly* shall be as carefully guarded as its editorial and news departments, and that its "columns are open to the

honest advertiser and shut fast and tight to the dishonest one". Among the classes of advertising which the *Legion Weekly* declares it will not accept are: Advertisements offensive to moral standards or sentiments; objectionable medical advertisements of such nature that claims are made not in accordance with facts or experience; advertisements of products which contain drugs of a habit-forming nature—dangerous to health.

FOR many years Indiana was burdened with a board of medical registration and examination that in no sense was a representative board or did credit to the medical profession of the state. It was a political board, the appointees receiving their appointments as a direct result of politics and not as a result of fitness for the position. After many years of service by such a misfit board we finally have succeeded in securing a board that in the main is representative and stands for high ideals. So far as the regular medical profession is concerned, it now is represented on the board by men who stand high in the estimation of the medical profession, and who not only are qualified but have the intention of serving in a manner that is entirely creditable to the position. We look for a high type of service and believe that we shall not be disappointed.

WE often have heard it said that the way to reach a man's heart is through his stomach. The chiropractors are trying to make people believe that the way to reach all diseases is through the spinal column, and they even go so far as to say that our senses are controlled by the spinal cord and any interference with our senses is due to pressure upon the spinal cord. Next they will tell us that we do not need any brains and that the cranial cavity with its contents is entirely superfluous. We are quite willing to admit that a brain is superfluous for the average chiropractor, who does not exhibit any great tendency to utilize his brain, even though said brain is as illy developed as it is in the average chiropractor. The idiotic and inconsistent nonsense concerning anatomical and physiologic facts, enunciated by chiropractors, would be amusing if not pathetic because believed by so many credulous people who sometimes suffer severe penalties in consequence of their credulity.

LETHARGIC encephalitis, commonly called "sleeping sickness", is prevalent on the Atlantic coast, and the health authorities of some of the larger cities like New York and Boston are attempting to cope with the disease by making it reportable, even though they admit that the disease is not contagious in the ordinary sense. Dr. Simon Flexner says that the disease probably is of microbic origin and of a communicable nature, though the New York City health commissioner says that out of the total number of cases reported last year in New York City only in two instances was a second case reported where one previously had been found. In Indiana there probably have been several hundred cases of the disease during the past few months, many of the cases having been cared for by public hospitals without attempt at isolation. So far as known no second case has developed as a direct result of contact with these cases. However, the seriousness of the disease should not be underestimated, in view of what seems to be a gradually increasing death rate.

WORD comes from Washington to the effect that the amount of liquor a sick man may acquire legally is fixed definitely by statute, but the only limit to the amount of wine he may obtain is the "sound and honest judgment" of his physician, and perhaps the depth of his purse. Really all this controversy over the permission to use alcoholic beverages of any kind in sickness seems to be not only unnecessary but has a tendency to nullify the effect of the prohibition acts. While we are not in sympathy with all that has been done in an attempt to make this country "bone dry", yet we are forced to the conclusion that if prohibition is a good thing then let us have real prohibition, and we venture to say that there is no more real necessity for sick people to have alcoholic beverages than there is for any person to have them. Furthermore, it is more than likely that many a man and not a few women may get sick at convenient times and be able to profit in alcoholic beverages at the expense of the "sound and honest judgment" of some physician. There also will be many a physician who can stretch his conscience in prescribing alcoholic beverages. Therefore, the whole question simmers down to one of evasion of the prohibition laws and regulations.

THE chiropractors, the Christian Scientists, the anti-vivisectionists, the members of the League for Medical Freedom, and a horde of other opponents of rational medicine, are able to raise large amounts of money for the purpose of fighting medical and public health legislation. There is no question but that money cuts a big figure in moulding public opinion and influencing legislation as a direct result of propaganda carried on through newspapers, magazines and paid lobbyists. The time has arrived when members of the regular medical profession must appreciate the fact that they must get busy in promoting sane and beneficial medical and public health legislation. This means propaganda, and

propaganda means expenditure of money. Some of the cultists secure from each of their members from twenty-five to one hundred dollars per year. Regular doctors, so far as we know, have never individually contributed a penny in aiding wise and beneficial medical or public health legislation. If they are not a lot of "tightwads" they will listen to a plea that may be made to them to contribute something for the support of a movement which has as its ultimate end not only the protection of the public from medical frauds, but the protection of the medical profession as well from vicious legislation.

WE are quite interested in the question of advertising inasmuch as THE JOURNAL largely depends upon advertising for its support. Therefore, we feel in duty bound to call the attention of our readers to the advertising in THE JOURNAL, even though we realize that perhaps all of the readers of THE JOURNAL regularly scan the advertising pages of the medical journals that come to their desks. In fact we are willing to gamble that the average doctor reads ten advertisements in his favorite medical journal to one that comes to him in the form of a circular letter, decorated blotter, or more or less ornate calendar. The doctor's waste basket is the receptacle for many an unopened circular letter or brochure from some manufacturing pharmacists; but the medical journal does not go into the waste basket, and its advertising pages are before the eyes of the doctor every time he picks up his favorite medical journal. We say this in the hope that advertisers will appreciate the value of medical journal advertising, though we also say it in the hope that the readers of the medical journals will take an interest in the advertising pages because they help to make medical journals bigger and better.

THE chiropractors in Indiana have had a merry time this winter. In addition to the notoriety secured through their efforts to be legally recognized by the legislature, and considerable free advertising secured from the newspapers, they have encountered a rather unpleasant reputation of having been responsible through ignorance for the death of several people who probably would have been living had the condition been recognized and treated properly. Anyway, the chiropractors are in the limelight and they are making the most of it. Incidentally, there are several hundred individuals in Indiana, many of whom do not possess even a common school education and none of whom know anything about the body in either health or disease, who are making good money in the chiropractic work. Perhaps eventually the public will realize how idiotic and expensive, both in lives and money, it is to place a premium upon ignorance and incompetency. But as long as the bitter truth has to be learned by experience, and the chiropractors are able to obtain support because they claim to be persecuted when efforts are made to restrict their operations, we can expect a continuation of the inconsistency of placing the health and lives of human beings in the hands of the uneducated and the illy-trained.

Now that the Indiana legislature has adjourned we can breathe a sigh of relief. The chiropractors failed in securing legal recognition, but what do they care for a little thing like that! They are practicing unmolested, and probably will continue to do so. The only thing that will stop their imposition upon the sick and suffering, whom they are shamefully deluding as a result of ignorance and incompetency, is public sentiment, and just now public sentiment is in their favor as a result of the erroneous idea that the chiropractors are being persecuted and that the members of the regular medical profession are jealous of the chiropractors. In the end the public will discover the truth, and, like all other fads and fancies in medical practice which are without rational foundation, chiropractic eventually will be in the discard. In the meantime a lot of gullible people will have to "burn their fingers before they know that the stove is hot," and the worst feature of this whole business of deception and trickery as practiced by the various medical cults that have no rational basis for existence, is that one no more than dies and is forgotten than another rises to take its place. Therefore, in a few years when we do not have chiropractic to contend with we shall have some other fad to attract and delude the sick and suffering public that is just as nonsensical and irrational as chiropractic.

SINCE the close of the war the Government has offered, and has asked us to advertise, several series of certificates of indebtedness bearing somewhat increased interest over that paid upon war bonds. However, persons who remember their experiences in fairly being "brow beaten" into purchasing Liberty Bonds that were represented by the treasury department always to be worth face value and probably go to a premium immediately after the war, only to find the bonds depreciated soon after purchase and remaining so up to the present time, are making no very great scramble now to buy Uncle Sam's certificates of indebtedness. Furthermore, when one contemplates the amount of unnecessary red tape that becomes necessary in order to get a dollar out of Uncle Sam for the payment of any indebtedness, it is not surprising that so many people have a

wholesome fear of any business transactions with the Government. It is unfortunate that such a condition of affairs exists, and it really indicates mismanagement of the worst type. No one should distrust his own government, and he wouldn't if those we put in office to take charge of governmental affairs possessed not only business honesty but business ability as well. We have a habit of placing in charge of our public affairs, even when it means the receipt and expenditure of vast sums of money, men who never did and never will make good with private enterprises. Probably we shall not change our habits, for it is a little difficult to get men of ability and business acumen to take public offices, so in all probability the future will offer little better than we have had in the past.

DURING the past two or three years we have heard a great deal about "group practice" in medicine under various names such as clinics, academies, etc., and such organizations are springing up all over the country in towns of 10,000 or 15,000 as well as in the larger cities. The *Journal of the American Medical Association*, February 12, 1921, in commenting on this subject, asks the question, "Is group practice a menace or a blessing?" and has the following to say on the subject: The development of modern medicine, and especially of scientific laboratory diagnosis, may make necessary some such cooperative plan as these groups are intended to provide. Equipment, laboratory, roentgen ray and the like, which the average practitioner is not able to provide or to utilize satisfactorily, may thus be cooperatively provided. But what of the outcome of this new development? What of the physicians outside the group? Some evidently are seeing the advantages and are forming other groups—perhaps in some instances forced to do so in self-defense! Will not this mean group against group? May it not be one more step toward the complete elimination of the general practitioner—of the family adviser—of him who heretofore has reflected to the public the altruistic motives of the medical profession? Does it mean that the family physician is being replaced by a corporation? Will commercialism or professional altruism control the management of these corporations, or groups if they are not incorporated? In thinking over this matter it is important to look ahead and see what influence this new development may have on the public. How will the average layman view it? Will he not prefer state medicine? We are asking, not answering, the questions—presenting but not attempting to solve the problem; for if we mistake not, it will prove to be a serious one.

IF they were built that way, the members of the Council on Pharmacy and Chemistry of the American Medical Association might become discouraged at the apparent indifference of many members of the medical profession to their efforts. There are many physicians who, while figuratively patting the Council on the back, actually do nothing to aid its efforts. On the other hand, there are men in the profession who give the Council active support instead of merely passive appreciation. The letter that follows was written by such a man to a pharmaceutical concern:

"I am receiving circular advertising from you concerning ——— ——— solution, and I am writing to suggest that until these products have been approved by the Council on Pharmacy and Chemistry of the American Medical Association, you are wasting your postage on the practice. Aside from the fact that these products do not appeal to me personally, I feel that I am not in a position to judge the value of such products and I depend entirely on the large clinical opportunities of the Council on Pharmacy and Chemistry of the American Medical Association, in addition to their laboratory facilities, in such matters as these. I may, therefore, with all due respect, suggest that . . it will pay you to eliminate my name from your mailing list."

The members of the Council on Pharmacy and Chemistry are working week in and week out without remuneration. Few appreciate how much these scientific men are doing for rational therapeutics; fewer still realize how much has been accomplished through their efforts, or how much more could be accomplished if every physician who at least believes in the work of the Council would give it his full support.—*Jour. A. M. A.*, Nov. 6, 1920.

SOME of the doctors who are contemplating attending this year's session of the A. M. A. may be surprised to know that already the hotel accommodations in Boston are fairly well exhausted in consequence of reservations by those who are accustomed to make all preparations long in advance. Probably none of the large cities would have been able to care for this year's session of the A. M. A. any better than will Boston, but we are of the opinion, as expressed in previous years, that the A. M. A. should hold its sessions where there can be no question about having the visitors cared for in a satisfactory manner. To be told along in January and February that all hotel accommodations for the first week in June have been sold, and that prospective attendants at the A. M. A. session must depend upon the chance of getting into a boarding house or private residence, is not very comforting news nor does it conduce

to a satisfactory attendance at the session. Atlantic City is the one and only place on this continent where hotel accommodations are ample and where conventions can be cared for properly. It is unfortunate that Atlantic City is not more nearly the center of population, but we of the middle west, and perhaps even those in the far west, would rather travel a little farther and pay a little more in traveling expenses and be assured of comfortable and convenient hotel accommodations after arriving at the convention. By all means let us get over this silly idea that a large association like the A. M. A. must go from city to city whether or not suitable accommodations for the session can be secured. When cities can offer the needed facilities for a large convention it is all right to consider their bids for patronage. Otherwise a location should be secured that offers suitable facilities no matter where such location may be. What is true of the A. M. A. also is true of our Indiana State Medical Association. Migration is an excellent thing, all things being equal, but it is a bad thing when adopted purely with the idea of giving the members a change and benefiting some particular locality.

WE have no desire to play the part of an alarmist and yet we cannot help feeling that the medical profession is drifting toward the rocks and in a very short time will meet with grave disaster. We have in mind particularly the growing tendency toward socialism in medicine which is being promoted from outside of the ranks but unfortunately is encouraged by a lot of unthinking persons within our ranks. Health insurance, free venereal clinics, hospitals under federal, state, or municipal control, and clinics maintained by industrial concerns, insurance companies, and benevolent associations are but entering wedges which eventually will result in state medicine and the elimination of private practice. It is not difficult to understand that without competition and the incentive to progress there will come a lessening of the benefits to be derived from such a changed order of things, but there is another phase of the question which is worth serious consideration and that is the economic annihilation of a profession that is not deserving of such fate. We have been too ready to give of our time and talents to public welfare without hope of reward and we have been virtually "easy marks" when it came to giving our support to "up-lifting" schemes of questionable benefit to the public and disastrous to our own welfare. In consequence we have been met everywhere with scant consideration when we have asked or expected any consideration which has meant improvement in our own condition. Probably in its death struggles the medical profession will put up a vigorous fight, but then it will be too late. The time to save the medical profession from annihilation is at present when we might, if united and active, defend our position successfully, and definitely fix our position in society as not only benefactors of the human race but our work as deserving of encouragement and support as individuals as well as a profession. It will be a sorry day for the people and a sorrier one for medical men when all human ills and physical abnormalities are subjected to the machinery of paternal attention given through the medium of state medicine, and all medical men are subjected to bureaucratic control and management.

THE Medical Department of the University of Michigan has proposed a plan whereby the state of Michigan enters into the private practice of medicine and surgery through the doors of the University. The surprising feature of the proposition is that it has the endorsement of a few salaried medical men who probably think that they would profit in consequence of the adoption of the plan. The clinics at the University of Michigan always have been a thorn in the flesh of the medical profession, in view of the practice of accepting patients irrespective of ability on the part of the patients to pay for the services rendered. A millionaire from Indiana, who pays no taxes in Michigan and does not contribute anything to the support of Michigan's institutions, can go to the University of Michigan clinics and secure gratuitous services and be on the same plane with the taxpayers of Michigan who have the same privilege. It is a rank injustice, but not content with the furnishing of gratuitous medical and surgical services in the University clinics, the plan now is proposed to take the clinics to the various sections of the state, to be operated by the salaried professors of the University and to enter into direct competition with the local medical profession. It is evident that this scheme to establish state medicine in Michigan will have considerable opposition, because already the medical men of Detroit have placed their seal of disapproval upon the project by a series of resolutions which are as follows:

"RESOLVED: 1. That any plan or intention on the part of the authorities of the University of Michigan to construct and use any part of any university hospital for the treatment of patients able to pay for medical or surgical services meets with our entire disapproval. (2) That to charge patients in the university hospitals or any other state hospital or institution for medical or surgical services rendered to them by employees of the state is a dangerous and vicious proposal and should meet with no approval

from any social group in this commonwealth. (3) That it is the opinion of this society that a high standard of medical education can be secured and maintained in the University of Michigan, both in its class rooms and its hospitals, by means other than those that are now proposed by its faculty, and in such a way as to be to the advantage of both the medical profession and the community itself."

Perhaps those who are proposing the new plan may have the support of the politicians of the state, and if so we may look for a merry time in Michigan, with the rank and file of the medical men fighting for their lives. It is bad enough to be obliged to fight state medicine from outside the ranks without having to fight it within the medical profession. We are beginning to think that it would be a good thing if some of the professors in our universities, who possess a rather exalted opinion of their abilities and position and who seem ever ready to sacrifice the economic standing of the medical profession for their own personal advantage, could be dethroned. In fact a house cleaning once in a while is a good thing, and some of the professors in our medical colleges, and others connected with various branches of public health service who are using their influence secretly or openly in behalf of state medicine, deserve to be driven from their positions.

DEATHS

BENJAMIN F. HOLMES, M.D., retired physician of Indianapolis, died February 19, aged 72 years.

JOHN H. HAYDEN, M.D., of Bethel, Delaware county, died February 13, aged 80 years. Doctor Hayden graduated from the Curtis Physio-Medical Institute, Marion, in 1885.

WILLIAM B. GILLIATT, M.D., Young Creek, Orange County, died in Lafayette, February 1, aged 72 years. Doctor Gilliatt graduated from the Cincinnati College of Medicine and Surgery in 1871.

JACKSON DAVID HORTON, M.D., Paoli, died February 1st at the Deaconess Hospital, Louisville, Ky . He was 61 years of age and graduated from the University of Illinois College of Medicine in 1884.

SARAH IRELAND, of Columbia City, widow of the late Doctor Martin Ireland and mother of Surgeon-General Merritt W. Ireland, died February 12 at the Illinois Central Hospital of Chicago. She was 92 years of age.

WILLIAM H. BAKER, M. D., Terre Haute, died January 23 at Chicago, aged 63 years. He graduated from the Hahnemann Medical College and Hospital, Chicago, in 1882, and had practiced medicine in Terre Haute twenty-five years.

MELVIN H. YOUNG, M.D., aged 63 years, died January 19 at Brazil. Doctor Young graduated from the Medical College of Indiana in 1892 and was a member of the Clay County Medical Society and the Indiana State Medical Association.

LOREN A. HYDE, M.D., aged 51 years, former superintendent of the Julietta Hospital for the Insane, died February 3 at his home in Indianapolis. Doctor Hyde graduated from the Medical College of Indiana in 1897. He was a member of the Marion County Medical Society and the Indiana State Medical Association.

THOMAS W. BULLETT, M.D., formerly practicing physician of Rivervale, Lawrence County, Indiana, died February 12, of arteriosclerosis, at Louisville, Ky. Doctor Bullett graduated in medicine from the Cincinnati College of Medicine and Surgery in 1874 and from the Hospital College of Medicine, Louisville, Ky., in 1875.

JOHN H. FORREST, M.D., Marion, died very suddenly February 6. Doctor Forrest graduated from the Chicago College of Medicine and Surgery, School of Medicine of Loyala University, in 1880 and had practiced medicine in Marion since the time of his graduation. He was a member of the Grant County Medical Society and the Indiana State Medical Association.

OWEN WALTER OWENS, M.D., died February 5 at his home in Muncie, aged 52 years. Doctor Owens graduated from the Chicago Homeopathic Hospital in 1897 and had practiced medicine at Muncie for the past twenty years. He was an active member of the Muncie Academy of Medicine, Delaware-Blackford Medical Society, the Indiana State Medical Association and the American Medical Association.

AUSTIN IRA DONALDSON, M.D., Washington, died February 27 of typhoid fever, aged 47 years. Doctor Donaldson was born in Daviess county in 1874, graduated from the Medical College of Indiana in 1903, practiced in Otwell for one year, then removed to Washington, where he has practiced continuously since. He was secretary of the Daviess County Board of Health and the Daviess County Medical Society, and was an active member of the Indiana State Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association.* Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. H. H. MARTIN, Laporte, has been elected president of the local Kiwanis Club.

THE New Randolph County Hospital was formally opened to the public on February 1.

DR. A. L. MARSHALL of Indianapolis, who has been attending eye clinics in New York, returned and resumed practice March 1.

PLANS are under way for the erection of a new wing at the Julietta Hospital for the Incurable Insane, to provide for the overflow of patients.

DR. JOHN STANLEY BROWN of Sullivan, recently graduated from the Cincinnati Medical College, has located at Carlisle for the practice of medicine.

DR. WILLIS W. CAREY, Fort Wayne, announces the opening of offices at the Lutheran Hospital with practice limited to nervous diseases and physio-therapy.

DR. GEORGE H. JONES, for the past four years secretary of the Missouri State Board of Health, has resigned and severed his connection with state health activities February 1.

THE State Senate has passed a bill, by a vote of 31 to 5, appropriating $225,000 for the erection of a new hospital and kitchen at the Indiana Soldiers' Home at Lafayette.

ON March 2, the *New York Medical Journal* in its 78th year was converted into a semimonthly publication. It also has been enlarged and some other improvements added.

PHYSICIANS of Marion on February 1 organized the Marion Medical Academy. Dr. G. G. Eckhart was named temporary chairman and Dr. Edwin Harrold, secretary-treasurer.

PROFESSOR WILLIAM T. SEDGWICK of the Massachusetts Institute of Technology, Boston, died on January 25 terminating a career of almost 45 years spent in the interest of public health.

THE *Charlotte Medical Journal,* published at Charlotte, N. C., has changed its name to *Southern Medicine and Surgery.* Drs. M. L. Townsend and J. C. Montgomery are editors of this medical journal.

DR. STANLEY A. CLARK of South Bend announces the addition of radium to his laboratory equipment in addition to diagnostic work. The laboratory is now equipped for efficient radium and x-ray therapy.

DR. ERVIN WRIGHT, for many years a practicing physician of Huntington, but who for the last two years had been located at Rolla, Missouri, has returned to Huntington and opened offices in the Hague Block.

THE *American Journal of Psychology,* established in 1887 by Dr. G. Stanley Hall and since edited by him, has been acquired by members of the department of psychology of Cornell University and will hereafter be edited by Professor E. B. Titchener.

DR. CHARLES P. EMERSON of Indianapolis was one of the speakers at the annual Congress of Medical Education, Licensure Hospitals and Public Health held March 7 to 10 at the Congress Hotel, Chicago. Doctor Emerson's subject was "Medicine and Medical Specialties".

As a memorial to the late General W. C. Gorgas and in recognition of his achievements in preventive medicine, Dr. Belisario Porras, President of the Republic of Panama, has proposed the foundation of an institute of tropical and preventive medicine in connection with the Santo Tomas hospital at Panama.

DURING February the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Armour & Co., Corpus Luteum Tablets, 5 grains; David B. Levy, DuBois Iodoleine, Injectable, Ampoules, 2 Cc.; E. R. Squibb & Sons, Fat-Free Tincture Digitalis.

THE Senate added $1,200,000 to the appropriations for the construction of hospitals for wounded and disabled soldiers during its debate on the Sundry Civil Bill. The hospital at Fort Bayard, N. M., was allowed $750,000; the Marine hospital at Evansville, Indiana, $100,000, and the Marine hospital at Pittsburg, $350,000.

MME. MARIE CURIE, the discoverer of radium, will visit the United States in May as the guest of Mrs. William Brown Meloney, editor of the *Delineator*. A reception committee of prominent physicians, who are engaged especially in radium work, has been appointed under the chairmanship of Dr. Francis C. Wood, of New York.

DURING the year 1920 the birthrate in France took a big jump upward and for the first time in many years births largely exceeded deaths. Detailed figures for the first six months of the year for all France including Alsace-Lorraine and the liberated departments show 424,668 births against 356,722 deaths, or nearly 68,000 more births than deaths.

DR. ERIC CRULL, Fort Wayne, has been elected and accepted position as superintendent of the Irene Byron Tuberculosis Hospital of Allen County, to succeed Dr. James A. Price, who has been in charge since the hospital was opened in 1919. Dr. Price has accepted a position as superintendent of the Memphis Tuberculosis Hospital, Memphis, Tenn.

THE staff members of the City Hospital, Indianapolis, met January 28 and organized a society to be known as the Staff Society of the Indianapolis City Hospital. A constitution and by-laws were adopted and officers were elected as follows: President, Dr. Harry L. Foreman; vice-president, Dr. Carl McCaskey; secretary-treasurer, Dr. William E. Gabe.

AT a special meeting of the central committee of the American National Red Cross held January 29, Mr. W. Frank Persons was elected vice chairman in charge of domestic operations in which capacity he will have jurisdiction over all matters concerned with the operation of the program of the Red Cross in this country. Mr. Persons assumed duties of his office February 1.

THE International Hygiene Congress, which was to have been held in Geneva, Switzerland, next May, has been abandoned. Six hundred delegates from all parts of the world were expected to attend, but on account of the low value of the currency of many countries and the high value of the Swiss franc, it was impossible to get Germany, Austria, Hungary, Cechoslovakia, Jugoslavia, Poland, Romania, and Bulgaria to send delegates, while it was also difficult even for France, Italy and Belgium.

THE New York Post-Graduate Medical School and Hospital announces that there will be available this year six scholarships under the terms of the Oliver-Rea Endowment. The purpose of the endowment is to award scholarships to practicing physicians of the United States to defray in full the expenses of tuition at the New York Post-Graduate Medical School. Applications may be sent to the president of the New York Post-Graduate Medical School and Hospital, 20th Street and 2nd Avenue, New York City.

PLANS for a children's state hospital in memory of James Whitcomb Riley took definite shape at a meeting at the Claypool Hotel, Indianapolis, February 2. It is proposed to ask the legislature for an appropriation of $250,000 for the construction of a children's hospital building with a maintenance and equipment fund of $150,000 a year for two years, after which the maintenance fund would be reduced to $50,000 a year. The hospital probably would be located in Indianapolis on a site near the Robert W. Long hospital.

THE Faculty of Medicine of Paris has arranged a course in Ophthalmology to be given at the Hotel Dieu by Professor F. de Lapersonne assisted by Associate Professors Terrein and Guillemont, Dr. Hautant, Otorhinologist to the hospital, and Dr. Velter, Dr. Prelat and Dr. Monbrun, chiefs of the clinic and the laboratory. This course will begin on May 10 and will be continued every day through the months of May and June. It will consist of clinical examinations, practical work in operative medicine and laboratory demonstrations.

A CONFERENCE of physicians representing various clinics in Indiana was held at Newcastle on February 10, the Newcastle clinic acting as hosts. Representatives from Brazil, Garrett, Laporte, South Bend, Terre Haute, Warsaw and Wabash were present. Drs. F. M. Whistler, Wabash, M. E. Klingler, Garrett, and F. M. Miller of Laporte were named as a committee to draft a constitution for the Indiana Medical Clinic Society, which will be officially organized at Indianapolis at the annual session of the Indiana State Medical Association.

PLANS are being perfected for the annual American Medical Golfing Association tournament—an entertainment feature at the annual convention—to be held June 6 at the Commonwealth Country Club. Drs. Franklin Newell, Walter Lancaster and Harold Tobey constitute the local (Boston) committee in charge. The American Medical Golfing Association is open to all Fellows of the A. M. A. in good standing. Full information may be obtained from Dr. Will Walter, 1414 Chicago Avenue, Evanston, Ill., who is secretary of the Golfing Association.

DR. WILLIAM A. KEEN of Philadelphia, on the occasion of his 85th birthday, January 20, was given a testimonial dinner in the Bellevue Stratford Hotel, Philadelphia, which was attended by many representative physicians and surgeons from all over the United States. A life size bronze bust of Doctor Keen was presented to him on behalf of the medical, civic and other organizations of many states. Doctor Keen has served as a medical officer in three wars and last fall presided over the International Congress of Physicians and Surgeons in Paris.

J. MACE ANDRESS in his book, "Health Education in Rural Schools," gives the following list of questions to be used as a guide by every school nurse and physician in determining the health condition of each child under his or her care: (1) Does he breathe well? (2) Are his teeth in good condition? (3) Is he too pale? (4) Has he a persistent cough? (5) Has he a running nose or running at the ears? (6) Has he any skin trouble? (7) Has he any swelling about the neck? (8) Are his sight and hearing normal? (9) What is being done to interest him in forming good health habits?

UP to February 15, thirty-five cases of typhus had developed among passengers taken from the steamers Presidente Wilson and San Giusto to Hoffman's Island, New York, and another case was discovered in a young man who had frequented the steamship docks in Brooklyn. Three of the patients have succumbed to the disease. Special precautions have been adopted by the United States Public Health Service to prevent further importation of the disease and a twelve day quarantine of immigrants from certain foreign points will be maintained at all ports where quarantine is under federal control.

ANNOUNCEMENT has been made that the annual convention of the American Hospital Association will be held at West Baden Springs Hotel, West Baden, from September 12 to 17. This association includes both the association of the United States and of Canada, and an attendance of 1000 to 1200 is expected, which will include hospital superintendents, trustees and surgeons. Major-General Wood will be on the program. A feature of the convention will be an exhibit of hospital equipment and supplies and all modern improvements in surgical apparatus. In connection with the exhibit the Social Service Departments will demonstrate their various lines of work.

THE annual meeting of the Elkhart County Medical Society was held in the Elks' Temple, Elkhart, on February 4. Speakers on the program were Dr. Andre Crotti, Cincinnati; Drs. Albert B. Yudelson, Joseph DeLee and Walter H. O. Hoffman, Chicago; Dr. A. M. Mendenhall, Indianapolis; Dr. G. W. McCaskey, Fort Wayne; Drs. M. W. Lyon, F. R. Clapp, Milo K. Miller and R. V. Hoffman, South Bend; Drs. S. C. Wagner, E. M. Hoover and J. C. Fleming, Elkhart; Dr. B. F. Teter, Middlebury; Dr. W. D. Price, Nappanee; Dr. A. G. McDonald, Warsaw, and Drs. A. C. Yoder, M. K. Kreider, F. M. Freeman, E. E. Ash, Goshen. Dinner was served at 6:30 in the Elks' Temple.

UNDER the auspices of the American Ophthalmological Society the Ophthalmic Section of the A. M. A. and the Academy of Ophthalmology and Oto-Laryngology, an International Congress of Ophthalmology will be held at Washington, D. C., April 18 to 22, 1922. The officers of the temporary organization are as follows: President, Dr. George E. de Schweinitz, Philadelphia; vice-president, Dr. Edward Jackson, Denver; secretary and treasurer, Dr. Luther C. Peter, Philadelphia; chairman of committee on organization, Dr. Edward C. Ellett, Memphis, Tenn.; on scientific progress, Dr. Edward Jackson, Denver; on finances, Dr. Lee M. Francis, Buffalo; on arrangements, Dr. William H. Wilmer, Washington, D. C., and on membership and credentials, Dr. Walter R. Parker, Detroit.

UNDER the direction of the recently organized Eye Sight Conservation Council, a nation-wide "Save Your Sight" campaign is to be conducted. The aim of the campaign is to acquaint the public with the importance of eye care and to urge the universal eye examinations of school children, workers in industries and clerks in stores and offices. Special literature will be sent to teachers, employers, and those especially interested in the advancement of efficiency and welfare in industry. Charts and posters are to be placed in school rooms and factories, visualizing eye care, depicting the advantages of correcting ocular defects, and warning against eye strain and its attending evils. The Eye Sight Conservation Council is a membership organization, the directors and councilors of which are professional men representing various organizations devoted to health welfare, education, science and industrial betterment. Dr. Cassius D. Wescott of Chicago is vice-president and Dr. Frederick R. Green, Chicago, Dr. W. S. Rankin, Raleigh, N. C., and Dr. Allen McLoughlin are members of the Board of Councilors.

THE *Journal of the A. M. A.* in its issue of February 19 makes the following comment on

the medicinal use of whisky in the United States:

"Things are not always what they seem," says the poet. And in the world of practical affairs, general statements, even oft repeated and popularly accepted, do not always check up with the facts. Much has been made of the claim that the adoption of federal prohibition has seriously interfered with the use of whisky for medicinal purposes by physicians. The Anti-Saloon League of Delaware, in a recently issued circular, presents an interesting table on this question, based on information furnished by federal and state officials and statistics taken from the American Medical Directory. According to this tabluation, there were, at the time the federal prohibition amendment was adopted, twenty-four states—one-half of the entire number—whose laws forbade either the writing or the filling of prescriptions for whisky or brandy. In these states naturally no permit under the federal law could be issued to physicians. In the remaining twenty-four states, in which there is no such law and in which, under the Volstead act, permits to prescribe whisky may be issued to physicians, there are, according to the *American Medical Directory*, 112,238 practicing physicians. Yet in these twenty-four states, only 33,379 physicians—29 per cent—have taken out permits. Evidently, the remaining 71 per cent do not regard whisky as of enough value in the practice of medicine to go to the trouble of taking out a permit.

CORRESPONDENCE

NEWS FROM DR. G. W. H. KEMPER

395 North El Molino Ave.,
Pasadena, Cal., Feb. 15, 1921.

DEAR DOCTOR:

The January number (1921) of THE JOURNAL came to hand in due time. I tell you it makes you feel like saying "Good morning" to an old friend when the postman leaves THE JOURNAL at your door.

Well, I am gaining slowly, and hope as summer is fully established that I will be in old time condition.

This is a remarkable country. Summer prevails in the day time, when the sun shines, and winter at night. We had a very heavy frost this morning, but it did not hurt anything. With us, such a frost would freeze and kill everything green.

An old gentleman "blew in" here a few days ago from northern Minnesota; someone had told him it was warm here. He stood it for two nights when he declared, "It was the coldest place he had ever found."

Dr. Dwight M. Green, formerly of Muncie, is nicely located at Los Angeles. He has secured a nice little home at 861 West 41st street, office, 701 Marsh-Strong Building. He is doing well.

Dr. L. L. Ball, of Muncie, is here for the winter with his wife and daughter. They are caring for Mrs. Mock, of Ann Arbor, Michigan, an invalid sister of Doctor Ball.

Your friend.

G. W. H. KEMPER.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	83
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	12
4.	Carroll	Eva N. Kennedy	20	22
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	24
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	26
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	10
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13

INDIANA STATE MEDICAL ASSOCIATION

COUNCILORS' REPORTS

To the Indiana State Medical Association:

I submit herewith the councilors' reports concerning the activities in the respective counties for the year 1920. Not at all differing from previous reports, you will notice that many societies and some entire districts have made no report to me, and, I am, therefore, obliged to publish the following incomplete returns.

In order to save expense in tabulation, I have listed the name of the county followed by four figures, the first representing the number of meetings held during the year; second, average attendance; third, number of scientific papers presented; fourth, number of case reports. To anyone really interested, the additional work in deciphering this report will not be any hardship.

FIRST DISTRICT:				
County—				
Gibson	2	20	3	0
Pike	3	5	2	2
Posey	1	7	1	1
Vanderburg	24	20	20	75
Warrick	4	6	4	0
Spencer	2	6	2	0
Perry	8	7		
FOURTH DISTRICT:				
Dearborn-Ohio	2	10	1	0
Jefferson	5	6	3	5
Jennings	8	5	4	40
Jackson	8	7	4	8
Bartholomew	9	9	7	6
FIFTH DISTRICT:				
Vigo	18	32	17	4
SIXTH DISTRICT:				
Wayne	6	..	5	2
Union	3	..	4	0
Fayette	11	12	0	0
Rush	4	10	3	0
Shelby	6	..	0	0
SEVENTH DISTRICT:				
Johnson	15	12	3	25
Hendricks	4	12	4	4
Marion	32	77	51	26
EIGHTH DISTRICT:				
Madison	9	20	7	2
Delaware-Blackford	14	35	12	12
Jay	10	10	..	..
Randolph	10	9	9	15
NINTH DISTRICT:				
Howard	9	12	8	20
Tipton	.	..	..	..
Hamilton	6	8	6	15
Clinton	7	10	4	2
Boone	0	0	0	0
Montgomery	4	20	4	0
Tippecanoe	10	25	5	28
Fountain-Warren	5	12	10	4

TENTH DISTRICT:				
Jasper-Newton	12	13	22	..
Lake	8	17	10	1
Benton	5	9	3	8
ELEVENTH DISTRICT:				
Grant	12	20	14	..
Huntington	11	11	10	3
Wabash	9	12	4	6
Miami	5	8	5	2
Cass	4	16	6	2
Carroll	9	..	8	..
TWELFTH DISTRICT:				
Adams	12	7	10	35
Wells	15	10	8	..
Allen	36	24	32	..
Whitley	7	8	1	8
DeKalb	6	12	8	10
Noble	4	15	8	3
Steuben	8	7	3	10

CHARLES N. COMBS, Secretary.

JASPER-NEWTON

The regular monthly meeting of the Jasper-Newton Medical Society was held at the home of Dr. L. H. Recher, in Morocco, February 25. Twenty members of the total twenty-six were present.

Dr. I. A. Abt of Chicago presented the subject, "Care of the Infant and Mother". He recognizes but few necessary reasons for taking a baby from the breast—acute febrile diseases as typhoid fever and erysipelas, tuberculosis and epilepsy; that while many mothers have insufficient milk for a time, or apparently for a time, the baby will not increase in weight as the family grandmothers and friends might desire, yet if we will keep persistently at it, can develop the breasts until a sufficient amount of milk and of a good quality will be produced. He emphasized the fact that in some manner nursing the breast transfers an immunity to the baby against disease. He would give the mother perfect freedom to eat what she wants. These were only a few of the almost hundreds of facts that Doctor Abt contributed from his ripe experience.

Everyone present expressed the opinion that this was one of the most profitable meetings ever held by the Jasper-Newton Society. After the program the hosts, Dr. and Mrs. Recher, served a bounteous dinner to the members and visitors, during which hour the seriousness of our reconstruction period was forgotten.

O. E. GLICK, Secretary.

MUNCIE ACADEMY OF MEDICINE
December 17, 1920

Friday evening at 6:15 the members of the Muncie Academy of Medicine, with 37 invited doctors from nearby cities, met at the New Kirby Hotel for dinner and to hear Dr. A. W. George of Boston speak on "The Value of the Roentgen Ray Diagnosis of the Pathology of the Biliary Passages."

Doctor George is a pioneer in this work. He spoke very convincingly concerning the possibilities of the Roentgen ray relative to the gall bladder and biliary tracts. He stated that the x-ray was coming more into general use, due largely to the fact that the interpretations are better, as a rule, than formerly. Dr. George presented many pictures reproduced from x-ray plates showing pathological conditions about the gall bladder which had been diagnosed with the Roentgen ray and confirmed by the surgeon at operation.

There was a very liberal discussion by Drs. Eckhart and Fankboner of Marion, Dr. Tom Jones of Anderson, Drs. Reed and Zellers of Union City, Drs. Mix, Fair and Spurgeon, and many other doctors present.

January 14, 1921

The Muncie Academy of Medicine met at the New Kirby Hotel at 6:15 p. m. for the weekly meeting. Minutes of previous meeting read and approved. Letter from Dr. C. O. Daniels was read thanking the Muncie Academy for hospitality shown the doctors of Marion and requesting copy of constitution and by-laws of the Academy.

CASE REPORT:—*Banti's Disease*—DR. W. J. MOLLOY.

Patient, R. F., entered hospital Sept. 1, 1920, age 33; single; occupation, farmer. Had measles in childhood and typhoid fever at age of 21. Had rheumatism in knee joints in 1917. Complained of rheumatism of knee joints when first examined. Few days after admittance began to have vomiting of blood and severe dysentery and bloody stools. This condition continued five or six weeks, when he began to improve. Short time after recovery from dysentery and vomiting of blood, began to have ascites; required tapping several times. Spleen was enlarged. Blood examination Sept. 15, 1920, as follows: Hemoglobin, 70; erythrocytes, 4,680,000; leucocytes, 7,400; Polys, 73; lymphocytes, 20; large monoculars, 6; eosinophiles, 1. Basis for diagnosis in this form of splenic tumor with anemia is: advanced stage of anemia, ascites, subicteroid discoloration of the skin, and the blood picture. Patient is still living.

PAPER:—"*Glaucoma*"—DR. W. H. HOLLIS.

Abstract:—Glaucoma is essentially due to damming or blocking of drainage from interior of eye and is characterized by increase in intraocular tension and gradual or sudden impairment or loss of vision. It appears as an inflammatory eye disease attended by severe pain and congestion and redness of eyeball and blurring of sight. Anterior chamber becomes shallow, pupil dilated and often oval or egg shape. Mobility is sluggish or may be totally inactive. Rare for all pupillary symptoms to be absent. Eventually loss of vision becomes permanent. Pain which is mild in first attacks becomes unbearable in later attacks. Cornea hazy and becomes insensible to touch. Disease progresses until there is complete disorganizaiton of structure. Lens becomes opaque, iris atrophic. Enucleation or evisceration frequently the only measure that will relieve suffering and make it safe for the other eye.

Iritis: Hard or quite impossible to separate iritis from cyclitis for the reason that the iris springs from ciliary body and both are nourished by the same blood supply. Symptoms appear gradually beginning with an itching or slight discomfort of the conjunctiva. Later pain of mild degree and photophobia and still later increase of pain especially at night. Much inflammation, especially at sclero-corneal margin. Must differentiate this condition from conjunctivitis. Can easily be done by using adrenalin. This drug will not bleach the deep seated injection at the pericorneal zone. Must not confuse with glaucoma because of the mal-effects of atropin in this condition. Pupil is always contracted, due to engorgement, edema, spasm and sometimes adhesion of the anterior capsule of the lens. Iritis, even though it is primary or secondary in the majority of cases, is due to micro-organisms or their toxins. Infectious iritis due to treponema pallida (about 50 percent) gonococcus and streptococcus (giving the so-called rheumatic iritis) tubercle bacilli and other organisms. Metallic iritis due to diabetis, gout and hyperthryoidism. In this latter class the altered metabolism may only lower resistance and the iritis be the result of micro-organisms or their toxins.

January 21, 1921

Dr. C. M. Mix reported a very interesting case of a child 9 months of age having swallowed a safety pin. X-ray showed the pin to be at the level of the seventh cervical vertebra, open, and the point pointing upward. Dr. Mix was successful in "Chevalier Jacksoning" it out with an ordinary hemostat and with no anesthetic.

PAPER:—*"Diagnosis and Treatment of the Obstructing Prostate"*:—DR. H. G. HAMER, Indianapolis.

Abstract: Gradually increasing frequency of urination, particularly at night, in a man past fifty, should suggest prostatic obstruction. Rectal palpation and the use of the catheter, supplemented by cystoscopy, render diagnosis fairly exact. Palliative treatment usually becomes preparatory treatment for removal of growth. Early operation is advisable before permanent bladder and kidney changes have taken place. Prostatectomy is seldom an emergency operation. Temporary relief can usually be given, and operation undertaken whenever conditions are favorable. Suprapubic operation is the one of choice. Prolonged preparatory treatment with careful estimation of the patient's fitness for operation, judicious choice of plan of operative procedure, selection of proper anesthetic and good postoperative nursing all contribute to good results.

DELAWARE-BLACKFORD

January 7, 1921

The Delaware-Blackford Society met at the New Kirby Hotel on Jan. 7, 1921. Meeting called to order by Dr. C. A. Sellers, President. Minutes of the previous meeting read and approved. Dr. H. D. Fair gave the financial report for last year showing the society to be in excellent condition. Along with a neat balance in the bank is a Liberty Bond which he was successful in obtaining for the society during his eight years as its secretary. A vote of thanks was given him for the excellent service rendered in this capacity. Dr. Jump reported the expenditures for the annual and very successful banquet which had been given the 10th of the preceding month. Chas. A. Sellers, S. G. Jump and R. H. Beeson were appointed as the program committee for the year.

CASE REPORTS:

Case—*Nephrolithiasis*—DR. W. C. MOORE.

R. W., male; white; age 24; intermittent hematutria, pain in abdomen, back and sometimes in testicle; fever; cystoscopic examination showed pus coming from right kidney. Stones shown by x-ray. Right kidney removed; 84 stones removed varying in size from pin head to one-half inch in diameter. Stones varied in shape, some being spiculed, others like a cockleburr and black in color. Patient had tried to connect his condition with an injury received by falling in lifting a heavy barrel.

Case—*Foreign Body*—DR. I. N. TRENT.

Patient complained of an enlargement of left thumb. Gross appearance was somewhat like sarcoma or a thick walled cyst. Piece of steel 5/16 by 1/8 inch removed. The steel was surrounded by fluid. Had been there for 25 years.

Case—*Double Kidney, right side with two ureters*—DR. F. E. HILL.

Woman, age 45, had had cystitis for many years. Cystoscopic examination showed three ureters emptying into bladder, one from left kidney and two from right kidney.

Dr. H. A. Cowing read a very interesting paper on "Obstetrics and Public Health".

R. H. BEESON, Secretary.

TIPPECANOE COUNTY

Regular meeting called to order at Hotel Lahr, January 25, by President McClelland. Minutes of last meeting read and approved without change.

Under clinical cases Dr. Shafer stated that the child with inoperable sarcoma, reported last meeting, was still alive and pert, that the laboratory reported nil because of unsatisfactory sample.

At this stage the regular order of business was suspended and Prof. C. B. Jordan read a paper on *"The Effect of Hydrogen-Ion Concentration and of Oxidation on the Toxicity of Arsphenamine and Neoarsphenamine."*

Synopsis: Subject interesting because committee on Revision of U. S. P. requires some chemical test must be accepted before product can be incorporated in U. S. P.

Data for following conclusions obtained by experimenters of the Public Health Service.

The parasite trypanosomia equiperdum was used on rats because infection limited to blood (not in tissues), easily propagated, runs a regular course and can be accurately followed by counting the number of parasites.

Experiments were made with the following objectives: Minimum effective, minimum lethal, and maximum tolerant doses by using 50 percent increasing doses, as: 1 Cc., 1.5 Cc., 2 Cc., etc. Within certain limits the process proceeded by a definite rate in lethal and effective doses.

Subeffective doses produce no clinical results probably because dose not large enough to overcome the reaction of the parasites, or because the body absorbs part of the dose.

Trypanocidal action of arsenic compounds: Trivalent compounds are much more toxic to both host and parasite than pentavalent compounds.

All arsenical preparations must be changed to trivalent *oxides* before exerting their principal toxic or trypanocidal action. The parasites are not reduced in numbers until after a latent period probably due to time required for the body to produce an oxidation process. These oxidation products of arsphenamine and neoarsphenamine are toxic to both host and parasite. The oxidation product of arsphenamine is seven times as toxic on rats as arsphenamine itself, and the oxidation product of neoarsphenamine is ten times as toxic as neoarsphenamine itself. In test tube experiments the arsphenamine or neoarsphenamine do not kill the parasites even in strong solutions; the theory being that oxidation products formed in the body are the agents that destroy the parasites.

Arsphenamine hydrochloride is stable in air, but the addition of an alkaline solution leads to a rapid rate of oxidation, especially when shaken in air. Neoarsphenamine rapidly oxidizes on mere exposure to air, amounting to 50 percent in ten minutes. Arsphenamine is absorbed slower and excreted slower than neoarsphenamine, therefore it is retained in the tissues longer. It is supposed to be more effective in syphilis (where the parasites are deep seated in the tissues instead of in the blood), because of this prolonged action. The only advantage attributed to neoarsphenamine is the greater latitude between minimum effective dose and minimum lethal dose; but to counterbalance this is its greater instability towards oxidation and its consequent danger of increased toxicity, and its lesser effectiveness in human syphilis.

Neoarsphenamine is less active therapeutically, but this difference is compensated by a more tolerant dose; it creates less commotion in the blood.

As shaking and exposing to air alkaline solutions of arsphenamine, and aqueous solutions of neoars-

phenamine rapidly renders them highly toxic, they should be used immediately in order to anticipate oxidation, or toxicity.

These experiments also showed that cacodylic acid does not possess any trypanocidal action even in lethal doses.

DISCUSSION

DR. CROCKETT:—"Does light make any difference?" *Answer*:—"Practically it does not. All these experiments were made in air."

DR. PYKE:—How long does it take neoarsphenamine to be eliminated from the body? It is absorbed quicker and eliminated quicker, therefore we should know the time consumed in order to know how often to give. Some trade packages didn't dissolve properly, leaving oily-like particles. These were not used and were replaced by the trade.

DR. CROCKETT:—Practically all makes give same results. At first some preparations didn't go into solution properly, later worked better because more familiar. Few cases develop acute arsenical poisoning, some cases at first no reaction, but gradually get more sensitive.

PROF. JORDAN:—Probably accumulative effect. As I have no clinical experiences these remarks are very interesting, but am sorry that cannot answer clinical questions.

DR. BAUER:—One case after fourth dose developed exfoliative dermatitis lasting for three months. Some trade member suggested to test for idiosyncrasy by first using sodium cacodylate and if reaction produced, don't use the arsenical preparation (arsphenamine or neoarsphenamine).

DR. HUNTER:—Water for solution should be boiled or distilled immediately before using in order to get all air out.

The society in regular manner extended a rising vote of thanks to Prof. Jordan for his excellent paper.

NEW BUSINESS

Dr. Kern of the milk committee reported the state inspector had investigated many samples. That they were all within the law. That there was no law against using condensed milk, reconstructing it, and selling it as milk. That condensed milk was sold openly and fearlessly. This milk was prepared by removing the cream, substituting cocoanut oil, condensing, shipping in great bulk to our dealers, where it is reconstructed and sold as pure milk, passing the butter fat test. That 48 percent of the milk supply of Indiana is illegal. Eighteen places in Lafayette were serving illegal milk.

Dr. Hupe moved, "That the next meeting be entirely devoted to the milk question, that a suitable program be procured and that we make it a meeting open to the public." Carried.

Adjourned: Present—Members 18, visitors 2.

WM. M. RESER, Secretary.

UNION COUNTY

The Union County Medical Society met in the Public Library, Liberty, February 2, with every member present. The evening was devoted to the discussion of two important subjects, Convulsions in Children, and Earache.

Every member of the county society is in good standing in the State Association, and with Dr. J. D. Shonwald of College Corner as president and Dr. E. R. Beard of Liberty as secretary the society is starting out with bright prospects for a prosperous and useful year.

The Union District Medical Society of southeastern Indiana and southwestern Ohio will meet at Liberty with the local society April 28. About one hundred physicians are expected to attend this meeting, which has met every six months for the last fifty-five years.

E. R. BEARD, Secretary.

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

GLOVER'S CANCER SERUM.—The Toronto Academy of Medicine reports unfavorably on the cancer cure put out by J. Glover of Toronto, Canada. The report of the special committee appointed by the academy may be summed up by the paragraph which reads: "The data which your committee has been able to obtain have not convinced it that the results of treatment obtained by the use of Doctor Glover's Serum are better than those obtained by similar methods introduced by others and which have ultimately disappointed the hopes entertained of them." The committee reported that it was unable to obtain any evidence to substantiate the experimental claims of Doctor Glover, as he had refused to permit members of the committee to visit his laboratory. The committee also reported that it found no evidence for the clinical claims made by Doctor Glover (*Jour. A. M. A.*, Feb. 5, 1921, p. 396).

SALICON.—This is sold by the K. A. Hughes Company, Boston, as "an improved aspirin". In a circular the claim was made, "We rendered aspirin absolutely harmless, and yet retained all its virtues as a medicine," "It positively will not depress the heart nor upset the stomach, no matter how large amounts of it are taken . . . The Massachusetts state medical authorities . . . adopted its use at all the state camps for fighting the Spanish influenza . . . " The first two claims are obviously false. As to the third statement, a letter written to the Commonwealth of Massachusetts brought the reply that the State Department of Health of Massachusetts does not endorse the use of Salicon for any purpose. The A. M. A. Chemical Laboratory examined Salicon and reports that the product is sold in the form of tablets and that each consisted essentially of a mixture of 3.2 grains of acetylsalicylic acid (aspirin), 2.2 grains of magnesium carbonate and some starch (*Jour. A. M. A.*, Feb. 5, 1921, p. 397).

THE WILLIAM F. KOCH CANCER REMEDY.—In 1918 William F. Koch graduated from the Detroit College of Medicine and Surgery. Less than a year after his graduation Doctor Koch declared that he had "developed a real specific cure for cancer". In the *Detroit Medical Journal* for July, 1919, there appeared a brief article by William F. Koch entitled "A New and Successful Treatment and Diagnosis of Cancer". A more extensive article was published in the *New York Medical Journal* of Oct. 10, 1920. As a result of the publicity given the Koch treatment, the Wayne County (Detroit) Medical Society appointed a committee to investigate the matter. The committee reported that Doctor Koch had submitted no proof that his injections had any particular merit and concluded that the study was entirely experimental and improperly supervised. Evidently the most that can be said for this alleged cure for cancer is that the claims made for it have not been supported by independent investigators (*Jour. A. M. A.*, Feb. 12, 1921, p. 466).

METOL DERMATITIS.—Workers in photographic establishments, especially those engaged in the developing process, are exposed to a number of industrial poisons. In an examination of forty studios in Chicago there were found thirty-one cases of poisoning by metol (the trade name for mono-methyl-para-amido metacresol sulphate), characterized by an erythematous rash of the hands and arms, occasionally involving other parts of the body and giving rise to ulcers. Various methods for the prevention of this dermatitis and for its treatment are published (*Jour. A. M. A.*, Feb. 19, 1921, p. 540).

IRON ARSENITE.—Ferric arsenite (iron arsenite) rendered water soluble by means of ammonium citrate is known as ferric arsenite soluble. The Council on Pharmacy and Chemistry in 1912 reported that the preparation was irrational and unscientific because "one cannot, in administering this drug, give a useful dose of iron without giving too much arsenic and, vice versa, one cannot give a safe dose of arsenic without giving too little iron" (*Jour. A. M. A.*, Feb. 19, 1921, p. 540).

THE WILLIAM F. KOCH CANCER REMEDY.—A physician writes about a case treated by Doctor Koch and submits a letter written by Doctor Koch a week before the woman died of generalized carcinomatosis. The two letters bring out the optimism engendered in the husband of the poor cancer patient by the widely vaunted treatment of Koch. Herein lies the most pernicious feature connected with the exploitation of alleged cures for cancer, tuberculosis, etc. All of such remedies, whether fraudulent or merely worthless, produce a profound and temporary change in the patient's condition. It is this that tends to warp the judgment, not only of the layman but also of the physician (*Jour. A. M. A.*, Feb. 19, 1921, p. 537).

BOROTETRAMIN ("BORO") not admitted to N. N. R.—Borotetramin and Boro are names applied by the Takamine Laboratories to hexamethylenamin diborate. It is a molecular combination of hexamethylenamin and boric acid which is readily split into its components. The borates of hexamethylenamin have been known for some time, and the triborate has been used in medicine as "Borovertin". Since Borotetramin must split into its components before it can act, it presents no distinct advantage over a simple mixture of hexamethylenamin and boric acid. For this reason the Council on Pharmacy and Chemistry reports that Borotetramin is a superfluous and, therefore, useless article and hence not eligible for inclusion in New and Nonofficial Remedies (*Jour. A. M. A.*, Feb. 19, 1921, p. 538).

MEDICINAL USE OF WHISKY.—In the twenty-four states of the union in which permits for the prescribing of whisky may be issued, there are 112,238 practicing physicians. Of these only 33,379 (29 per cent.) have taken out permits. Evidently the remaining 71 percent. do not regard whisky as of enough value in the practice of medicine to go to the trouble of taking out a permit (*Jour. A. M. A.*, Feb. 19, 1921, p. 524).

SODIUM CACODYLATE, ARRHENOL AND MON-ARSONE.—At least three arsenicals not of the arsphenamine type have in recent years been the subject of some exploitation for use in the treatment of syphilis, namely, sodium cacodylate, Arrhenol (the sodium salt of methyl arsenic acid) and Mon-Arsone (the sodium salt of ethyl arsenic acid). As to the first two, it was shown several years ago that neither had any action on trypanosomiasis or spirochete infection. The inefficacy of sodium cacodylate in human syphilis has been demonstrated clinically. Animal experiments made in the United States Hygienic Laboratory have demonstrated that Mon-Arsone is devoid of any practical trypanocidal action. Whereas the "therapeutic ratio (the ratio of the minimal effective dose to the lethal dose) was 17 and that of neoarsphenamine 28, the therapeutic ratio of Mon-Arsone was found to be about 1, that is, it was effective therapeutically only in approximately fatal doses. The high arsenic content of a compound and a low toxicity and a number of cases of apparent clinical improvement does not indicate that a drug has real value in the treatment of syphilis. Many drugs cause temporary improvement in syphilis, but so far only those arsenicals related to arsphenamine have proved of real value and comparatively safe (*Jour. A. M. A.*, Feb. 26, 1921, p. 595).

MORE MISBRANDED NOSTRUMS.—The following products were the subject of prosecution by the authorities charged with the enforcement of the Food and Drugs Act on the ground that the therapeutic claims made for them were false: Robinson's Alfalfa-Nutrient and Alfalfa Blossom (Alfalfa Chemical Company), the first claimed to be a new scientific discovery which would make thin people plump, the second claimed to be a treatment for women's ailments. Creole Female Tonic, Pa-Nol and Royalin Oil (Parker-Blake Company), the first represented as a cure for female diseases and other conditions, the second represented as a cure for indigestion, dyspepsia, kidney and bladder trouble and other conditions, the third represented as a cure for burns, colic, sore throat, sore eyes, sore mouth, piles, diphtheria and rheumatism. Hill's Specific or Aromatic Elixir (Hill Chemical Company), represented as a specific and cure for diarrhœa of children, summer complaint, etc. Morley's Wonderful Eight (Morley Medicine Company), represented as a cure for colic, sore throat, lung disease, etc. Salvitæ (American Apothecaries Company), represented as a cure for gout, rheumatism, etc. King's O. K. Capsules (Hance Brothers and White), recommended for gonorrhea, weakness, diseases of the bladder or kidneys, etc. Ring's Rose Injection (Charles L. Huisking), represented as a cure for gonorrhea, gleet, whites, etc. Prescription 500 Capsules (Grape Capsule Company), represented as a cure for gonorrhea, etc. (*Jour. A. M. A.*, Feb. 26, 1921, p. 606).

BOOK REVIEWS

A TEXT-BOOK OF PATHOLOGY. By William G. MacCallum, M.D., professor of Pathology and Bacteriology Johns Hopkins University. Second edition, thoroughly revised. Octavo volume of 1155 pages with 575 original illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, $10 net.

This book is interesting because different from other works on pathology though sufficiently comprehensive and practical to meet the needs of the student. An effort has been made to discuss the general principles of pathology as illustrated by a study of the commoner and more important diseases. The author starts out with the idea that any and all pathological disturbances are the result of some form of injury, or of the immediate or more remote reactions of the body to injury. Therefore, except in the case of tumors, the book is devoted to the various types of injury and their immediate and remote effects. In

other words, the author discusses disease upon the basis of etiology. However, perhaps nothing could be added which would give the student a better idea of the pathology of the commoner and more important diseases, and the arrangement and method of handling of the subjects is commendable. Our experiences in the Great War brought about intensive study of physical and mental results which never had been heard of before, including the effects of great epidemics and all the misery and disease that have followed famine and cold. The events in connection with this study have been noted in this second edition, requiring for the most part a rewriting of the entire work. The book, therefore, may be considered up-to-date and suited not only for the needs of the student but the general practitioner as well. A large number of excellent illustrations, many of which are in colors, add to the value of the work.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE, by James M. Anders, M.D., Ph.D., LL.D., professor of Medicine, Graduate School of Medicine, University of Pennsylvania, Fourteenth Edition, thoroughly revised with the assistance of John H. Musser, Jr., M.D., associate in medicine, University of Pennsylvania. Octavo of 1284 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1920. Cloth $10 net.

The Great War with its lessons in the causation and treatment of diseased conditions has compelled us to modify many of our old viewpoints, and in consequence many of our medical text-books are not up to date unless revised and rewritten. Anders' Text-Book of the Practice of Medicine always has been a very progressive and up-to-date work and the present, or fourteenth edition, just from press, fully meets our expectations in keeping up its reputation for progressiveness and up-to-date character. All of those diseases which were prevalent during the World War have been described and all newly developed facts concerning them incorporated in the new text. Among these are typhus fever, yellow fever, cerebrospinal meningitis, pneumonia, ictero-hemorrhagic spirochetosis, diabetes millitus, scurvy, pellagra, pernicious anemia, exophthalmic goitre, focal infection, tuberculosis, mumps, measles, humolytic jaundice, humolytic anemia of pregnancy and the puerperium, and Banti's disease, as well as asthma and hay-fever, by incorporating the further studies of these disorders in their relations to foreign protein.

In the section on diseases of the heart certain diagnostic criteria for determining the presence or absence of true valvular disease have been presented. The various types of heart block, as determined by the electrocardiagraph, are discussed from the clinical standpoint. Among sections which have been entirely rewritten is that of influenza, and the studies and experience of the recent pandemic have been incorporated. Again, the relation of varicella to herpes and the vaccination treatment of the former have been noted.

Among complaints not hitherto described in this work are the following: Bronchial spirochetosis, streptococcic (hemolytic) pneumonia, trench nephritis, disordered action of the heart, chronic (syphilitic) aortitis, interstitial emphysema, epidemic encephalitis, oxycephaly, wood (methyl) alcohol poisoning, and botulism.

In this, as in previous issues of the work, diagnosis, including differential diagnosis and treatment, have been especially stressed. The fact that a knowledge of the special causes of individual diseases is of material assistance in their recognition and treatment has been given attentive consideration.

Altogether the work meets the high standard of excellence attained in previous editions, and it is deserving of continued appreciation on the part of the medical profession.

LABORATORY MANUAL OF THE TECHNIC OF BASAL METABOLIC RATE DETERMINATIONS. By Walter M. Boothby, A.M., M.D., and Irene Sandiford, Ph.D., Section on Clinical Metabolism, The Mayo Clinic, Rochester, Minn., and The Mayo Foundation, University of Minnesota. Octavo volume of 117 pages, with 11 Tables and Charts of Explanation. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, $5 net.

This book comes at a time when there is a distinct and real need for just such a work. Interest in basal metabolism is becoming more and more general as the significance of this important diagnostic method becomes better known and appreciated.

The special value of this book is that it describes in detail the technic of measuring the basal metabolism. It tells what precautions and safeguards to observe in making these determinations. All these practical points the clinician must know. The splendid illustrations given quite liberally throughout the book are of appreciable help in enabling the reader to grasp more vividly the ideas conveyed in the text.

The one great drawback to this work is that the authors describe only the gas analysis method, which is apparently the only method used in their clinic. There is no description of the technic with the portable type of respiration apparatus devised by Benedict for measuring the basal metabolic rate, an apparatus which has become quite popular and is being used in quite a number of well-known clinics.

However, in this book the general technic of making basal metabolism observations is given so tersely, so clearly, and so completely, that it should be in great demand among those interested in these studies, no matter with what type of apparatus these studies are being made.

HENRY MILLS HURD, The First Superintendent of the Johns Hopkins Hospital. By Thomas Stephen Cullen. Cloth, $1.50. The Johns Hopkins Press, Baltimore, 1920.

Undoubtedly Dr. Henry M. Hurd was one of the outstanding figures in American medicine. As the first superintendent of the great Johns Hopkins Hospital he helped very materially with his unusual constructive ability to establish and build up this world-famed institution.

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(Continued on Adv. Page IV.)

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ORIGINAL ARTICLES

STUDENT HEALTH AT INDIANA UNIVERSITY*

J. E. P. HOLLAND
INDIANA UNIVERSITY
BLOOMINGTON, INDIANA

By action of the Board of Trustees of Indiana University there was established in the fall of 1914 a Department of the University Physician. This was prompted by the realization that the University was not meeting its full responsibilities to the citizens of the state in that the general health of its students was given but minor concern.

The student body at this time was greatly increasing in size and complexity, thereby making the supervision of its health a matter of great importance. Therefore, the University conceived its duty to be (1) the treatment and care of those who became ill; (2) proper sanitary conditions not only of the University buildings and equipment, but also at the different lodging and eating quarters of the students; (3) instruction of hygiene laws; (4) study of the physical condition of all students; and (5) physical training adjusted to the physical needs of the different students.

To meet these needs the University has (1) a Committee on Student Health; (2) a Department of Hygiene and Sanitation; (3) a University Isolation Hospital; (4) funds for the hospital care of certain students; (5) a University Physician, with ample assistance.

Work of the Committee on Student Health. This committee has been active for a great number of years, and always has consisted of those members of the university staff who are by their training best fitted for this task. It has had general supervision of the sanitary conditions about the University buildings and the living quarters of the students in the city. A close watch is kept on the condition of the water used by the students. To this end daily analyses are made of the water from the University Water Works, the City Water Works, the Men's Swimming Pool and the Women's Swimming Pool. During the past seven or eight years this committee has made regular inspections of the various boarding places frequented by students. Careful notice is taken of the lighting, spacing and general adequateness of the eating houses. Inspection is made of the screening during fly seasons, garbage disposal, dining room, kitchen, cellar and refrigerator cleanliness, and the storage of foods. The committee has found in nearly all cases a gratifying disposition on the part of the boarding house keepers to cooperate and to carry out the requirements of the inspectors. On the basis of these inspections an approved and unapproved list of boarding houses are made out and supplied to the filing office. The approved list is at times published or in some other way made accessible to the student body. The result of this system of inspection has been a very marked improvement in the boarding places accessible to the students.

Courses in Hygiene. Completion of a course of seventeen lectures covering the essentials of hygiene and sanitation is required of all students. This course is under the direct control of one member of the faculty, who organizes and controls the course. The lectures are given by experts in the respective topics discussed. A great deal of care has been taken in the organization of this course to make it most effective, and the students are required not only to attend, but also to pass an examination on the topics covered during the semester.

A new department of hygiene recently has been established at Indiana University, and is supported in part by the federal government. The aim of the federal authorities has been to establish one such department in every state in the Union, and these departments must be in colleges and universities which maintain training schools for teachers. The federal fund is administered by the United States Interdepartmental Social Hygiene Board, which has the following membership: Carter Glass, Secretary of the Treasury; Newton D. Baker, Secretary of War; Josephus Daniels, Secretary of the Navy; Lieut. Col. W. F. Snow, Medical Corps,

*Presented before the Indiana State Medical Association at the South Bend session, September, 1920.

U. S. A.; Lieut. Commander J. R. Phelps, Medical Corps, U. S. N.; Asst. Surg. Gen. C. C. Pierce, U. S. Public Health Service; T. A. Storey, M.D., Ph.D., Executive Secretary. The Administrative Board makes certain requirements of the institutions, among which are the following: All students who expect to teach are required to take fifteen hours of work in the department. Six hours of this work must be done in the division of informational hygiene, which includes general, individual, group and intergroup hygiene. The remaining portion of the required work shall be on the principles of physical training and applied physical training. The government requires that the institution maintain a department for medical examination, that there shall be one medical examiner for men, and one medical examiner for women. These examiners must be selected with special care because of the presence of extraordinary opportunities to exercise a powerful influence upon the mental, moral and physical health of the students with whom such examiners come in contact.

Isolation Hospital. One of the things for which the committee continually has to be on the lookout is contagious disease. This is especially true after the students have returned from their vacations in the various parts of the state. All sorts of infections are likely to be gathered up by the students and carried to the University, and when there developed the University and community of course get the credit for unsanitary conditions. For the proper care of infectious and contagious diseases the University owns and maintains an isolation hospital where students are taken if they cannot be safely and comfortably isolated in their homes or lodging houses. This hospital is a large, comfortable house, beautifully located in a plot of four acres in the suburbs of Bloomington. The rooms and all suspected places are disinfected, and every precaution is taken by the committee to safeguard the rest of the student body.

Fund for the Sick. For certain special cases the University has available a fund to meet the expenses of the students during sickness or accident. In general, this fund is available only for cases of accidents for which the University feels itself in a measure responsible, or where the financial condition of the student is such that he cannot be taken care of in any other way. This sick fund is derived chiefly from the profits of the University Book Store which the University maintains for furnishing students with books and supplies at a nominal cost.

The University Physician. The University Physician's duties include: (1) The physical examination of all entering students; (2) the physical examination of all other students who take gymnasium or other athletic work; (3) the prescription of corrective gymnastics; and (4) the giving of medical advice, free, to such students as may wish to consult him. The University Physicians do not, however, take charge of serious cases of illness.

Examination of Freshmen and Sophomore Students. A complete physical examination is given every student on his first or second entrance to the University. This comprises heart, lungs, eyes, ears, nose, throat, teeth, skin, abdomen, posture, spine and extremities. After this examination a student is placed in one of four groups: Group I, those of normal health and build; Group II, those of flat chests but otherwise normal; Group III, those of flat chests, poor posture, curvature of the spine, demanding organized corrective gymnastics; Group IV, those who have heart disease, deformities or other organic conditions preventing them from taking any form of gymnastic exercise.

Examination of Other Students Taking Gymnastics or Athletic Exercises. Students other than freshmen and sophomores who undertake gymnasium or athletic work must each year submit to an examination showing their fitness for such work.

Prescription of Corrective Gymnastics. Any student who has unusual physical conditions requiring special corrective gymnastics is examined jointly by the University Physician and the Director of the Gymnasium. Many cases present conditions which require individual training, which is personally looked after by the Director of the Gymnasium.

The Department of Physical Education for men devotes a major portion of its time to the upbuilding and corrective work necessary in those students who are by various disabilities not fitted for military training, and in the past many marvelous results have taken place by the individual oversight of the Director of the Gymnasium. By the combined efforts of the Department of Physical Education and Military Training every freshman and sophomore man student is given a training that has for one of its objects the betterment of the physical body as well as training for a military career. The Department of Physical Education for women likewise requires of every freshman and sophomore woman student a two years' course in physical education. This consists of didactic, indoor and outdoor sports, hiking, hockey, floor, ladder and ring work, basketball, etc.

I am thoroughly of the opinion that no form of exercise, whether in the gymnasium or the privacy of the home, that is suggesetd as a means of overcoming some defect, be what it may, is of any worth whatever unless a large element of play and fun or competition is present in large degree.

Compulsory military training was established at Indiana University just prior to our entrance in the World War. This training not only fitted our young men for army service, most of whom became officers, but exerted a very potent influence on the health of those participating. Many postural defects were eradicated. The setting up exercises and mass plays, not forgetting the drill itself, worked wonders in developing a perfect physical make-up, so evident to all that those persons in the University who were against compulsory military training are now among its most ardent supporters.

When the Department of the University Physician was first established the University Physician was without assistance with the exception of student help to keep the records. The work gradually grew to such proportions that it was impossible for one to render the service demanded, so that an assistant University Physician was appointed in 1917. The University being a co-educational institution it was deemed wise and best to appoint as an assistant University Physician a woman physician, one in whom the women students might with perfect frankness detail the various disorders of sex. In the selection of this assistance the matter of a bacteriologist also was given consideration in order that sputum and other infectious secretions, urine, etc., might be analyzed and proper care be established, where the daily examination of the city water supply, the University water supply and the water from the different swimming pools may be made in order to maintain a proper safeguard about our students.

The daily examination of the various water supplies has proven to be a valuable means of preventing the various enteric disturbances due to polluted water, as the City Water Works court this daily analysis and thereby keep the filtration and purification plant in proper working order. We have a daily check on the condition of our purification plants, viz., University water supply and swimming pools, and thereby keep them in a practically sterile condition.

I may be asked what number or percentage of our student body is suffering with any of the specific diseases. We are indeed fortunate in that but four or five cases a year is about all we come in contact with, whereas in former years 10 percent or more of the men students were so affected. This reduction has come about in a small way by education, but the real cause of its lowering is prohibition. Prohibition from the standpoint of higher education and health is the greatest single factor put forth in the history of this great country.

A summary of the work done in the office of the University Physician during the year 1919-1920 is as follows:

Out of a total enrollment of 3701 students, of which 2656 were men and 1045 were women, the treatment and examinations were:

	Men	Women
Eye, Ear, Nose and Throat....	797	963
Furuncles	229	124
Skin	216	314
Accidents	214	316
Lungs	121	152
Influenza	109	25
Abdominal	69	118
Vaccinations	66	69
Nervous	54	155
Gastric	35	16
Feet	23	30
Exanthemata	19	1
Hepatic	16	0
Cardiac	7	5
Renal	3	2
Gynecological	..	93
Miscellaneous	..	133
Physical examinations.....	1457	725
	3433	3241
Grand total.....		6674

A careful investigation of conditions at other leading American universities shows that Indiana University has not been lax in meeting this most important phase of its work, and places her in the front rank both in respect to the activity of the University authorities and in the actual health conditions of the student body.

In closing I wish to emphasize the cordial relationship existing between the physicians of Bloomington and the University Physicians, for without this cooperation I believe the department would not have had the success obtained.

THE BENEFITS OF COMPULSORY MILITARY TRAINING*

C. E. REED
CULVER, INDIANA

Compulsory military training as a national policy has been accepted by many European peoples for generations, and following our American War for Independence, and the War of 1812, our own government adopted such a policy, as evidenced in the Annual Muster or Training Day, on which all men between the ages of 18 and 45 were required to foregather, with such arms as they possessed. The training was for one day only, and obviously inadequate —and organization there was none, as we understand the term today, but the exercise or requirement served its real purpose of giving to the men of the times a sense of their obligation to bear arms for the defense of the state or

*Presented before the Indiana State Medical Association at the South Bend session, September, 1920.

nation. Aside, however, from the value of military training for military purposes, the system has distinct value in the development of young men into the best type of citizens.

To secure the best results from the "three Rs" it was found desirable and practicable to make school attendance compulsory. So to obtain the best results from military training that, too, should be made compulsory and accepted as a part of our educational system. The results will not be merely physical. There will be also mental and moral advantages.

Looking at the question from our standpoint as physicians, the first consideration naturally will be the physical gain. Time was when the profession as well as the laity thought of the doctor as a dispenser of pills and potions—a healer of diseases, and under that conception of his duties he attained distinction and honors second to none of the learned men of his time. In the past half-century ideas have changed and laity and profession have come to feel that a physician's larger service is in the prevention of disease. And the laurel wreath goes to those who by research and painstaking experiment discover the cause of disease and the means of its prevention. Twenty-five years ago the term preventive medicine was new. Today it is on every tongue, and every medical school of standing has its chair of Preventive Medical Science. We have made great progress, but those who have had part in the physical examinations of the millions of young men for our great army in the World War were shocked to find 26 percent of those between the ages of 21 and 31 physically disqualified for service, and an additional 6 percent who were accepted for limited service only. Nearly one-third of our young manhood physically crippled! And of the two-thirds who were accepted a large percentage were far from being the perfect physical specimens we picture to ourselves when we speak of "our sturdy young Americans". Some of these men, to be sure, were upstanding, square-shouldered, clear-skinned, keen-eyed fellows whom any of us would be proud to call our sons. But all too many were round-shouldered, flat-chested, sallow-skinned, dull-eyed men, under-weight or overfed, lacking punch, ambition, fire. And such men we gave to the training camps to be molded into an army which should typify America.

Some of us were privileged to watch these men in training and to note the rapid transformation which took place under the drill and regular life. The first change was in carriage, resulting from the so-called setting up drills, given largely to develop co-ordination and co-operation, but resulting in better posture for the individual, fuller chest expansion, deeper breathing, and improved circulation. It goes without saying that these changes were followed by improved metabolism and better elimination. Regular habits of eating, regular hours of sleep, the lack of opportunity for dissipation, all contributed to the transformation. These factors combined with the various drills and exercises, covering several hours daily, eventually gave us an army of men physically second to none of the allied group.

Bringing together large numbers of men from different localities and different walks of life into the close contact, under camp conditions, is always attended with some risk. When this grouping is done with deliberation and proper preparation, the danger is greatly reduced. We cannot forget our disastrous experience with influenza two years ago, but that, in all fairness, must be attributed more to our unpreparedness and lack of organization than to those things which are inherent in the military regime. After the military machine was organized so that it began to function in a normal fashion, the regular medical inspections and constant supervision of sanitary conditions made the general health of the men concerned better than it had been on the average in home environment.

Right here I wish to note that the enforced observing of sanitary and hygienic regulations undoubtedly "gets into the blood", and carried back into civil life reacts favorably on community life. Daily "policing" of the camp, *i. e.*, the cleaning up about the buildings and grounds, the care of latrines and public places, and the consequent safety of the organization, breeds a habit of mind which never again will permit the men to complacently contemplate the untidy streets of the small town or village, the unsightly dumping grounds, or the malodorous open vault privy. The constant caution in the matter of safe drinking water, and the protection of food supplies, will be valuable contributions to that warfare which is rapidly making typhoid and dysentery diseases of the past.

Since beginning this paper I have had an experience which, to my mind, gives weight to my contention for the value of enforced military training and discipline. Together with the superintendent of the institution with which I am connected I was asked to take charge of a group of 350 Boy Scouts and their leaders in a two months' tour of England, France and Belgium. The superintendent had charge of organization and discipline. I had the health and sanitary problems. The lads were between 12 and 18 years of age, from 32 states and 103 towns. We had two days in which to effect some sort of organization before embarkation. We spent two weeks on board ship, under troop conditions, three weeks in a camp of 5,000 boys in London, and two weeks in the cities and on the

battle fields of France and Belgium, always under high tension and frequently under camping conditions far from ideal. But by methods which obtain in a well-ordered military camp we succeeded in carrying this heterogeneous, highly susceptible group through the two months' experience with the development of only one case of chickenpox, one case of measles and three cases of scarlet fever. The group as a whole returned to New York in better flesh and better color than we received them at the place of mobilization. Colonel Siler, of the U. S. Medical Corps, who traveled with us on the return voyage, said this accomplishment was, in his opinion, one of the most remarkable that had come under his observation. Without organization, system and discipline of the kind I have described these results would have been impossible.

The experiences of men in a modern military camp will react favorably on the medical and surgical service in civil life. It is unfortunately true that in the recent war some of the dispensary and field hospital work was far from ideal, but in the main the men selected and the work done were of the very highest order. Such conditions obtaining in the camps devoted to the training of young men through a prescribed period each year for one, two or three years, will inevitably give them a better conception of what medical treatment could and should be, and returning to their homes, especially in the small towns and country districts, these men will demand of the local physicians better and more up-to-date methods than frequently prevail. Men graduating from the present day medical schools have been well trained, but lacking the spur of public demand many good men grow careless, fall into slipshod, unscientific ways and fail to do justice to their patients, themselves, or our honored profession.

Each day the profession is realizing more fully the close relation between the attitude of mind and physiological processes. The man who fails to take into account the psychological facts in the history of a given case may miss the most essential point. Physical poise tends to mental alertness. Improved co-ordination of physical movements increases accuracy and promptness in mental activity. For years we have been working to this end in the gymnasiums and manual training activities of schools and colleges, and the military training carries the work a step further. The responsibilities imposed and the opportunities for leadership offered develop initiative which carried back into the ordinary business gives the man a new prestige in his original surroundings. To be sure "you cannot make a silken purse out of a sow's ear", but a sluggish mind may be aroused, a lazy mind quickened, and dormant unrecognized faculties awakened. In two comparatively recent emergency situations which came under my observation the quick and accurate response of the alert disciplined men who had had military training resulted in the saving of life, where the slower disorganized efforts of strong, willing, but undisciplined men had failed.

American youth needs, more than almost anything else, respect for constituted authority. Much objection has been made to military life on the ground that the will of the soldier is constantly subject to the will of the officer; a condition out of harmony with the idea that the American is a free man and subject to no one. Yet in civil life we daily submit to one man's dictation for the good of the majority. For example the traffic policeman holds up his hand—we stop. He waves his hand—we proceed. We submit to his authority not because we admire the policeman, not because of his superior wisdom, but because for the time being he represents the commonwealth and is administering those regulations that safeguard and facilitate traffic. The will and the safety of the majority is supreme. This idea is fostered by military training.

Objection has been made to military discipline on the score that when military control ceases there is less regard than usual for civil authority. In individual cases that doubtless has been true, but my own observation has been that such instances are rare and have been given undue prominence in press accounts. This opinion is supported by the answers to a recent questionnaire addressed to a large number of competent observers. In fact the evidence seems to indicate that those who have been under military discipline, thoroughly and wisely administered, are less tolerant of indifferent enforcement of civil regulations than are average citizens.

We Americans are essentially individualistic in our habits of thinking. Altruistic also—the two are not incompatible. Without group activities and group interests this individualism tends to selfishness. Compulsory military training offers one very effective means for providing needed group activity. Close contact with other men of varying gifts, from widely divergent walks of life, gives a better standard of self valuation, a truer self-respect, and a larger regard for the worth and rights of one's fellows. The true democratic spirit is engendered, and the welfare of the community, the state, the nation, becomes the dominant interest of men so trained.

Fear has been expressed that the mingling of the youth of so many different strata of society,

with widely differing standards of personal morality, will lower our national standards of morality, but I believe strongly that the converse is true. The group for whom compulsory training is suggested is made up of your sons and mine. If they are tending to moral degeneration, the sooner they are brought out into the open where unprejudiced leaders shall observe the fact and apply some remedy, the better. Most men who are in touch with lads of high school and early college age will agree that we have nothing to fear. The right thinking majority will dominate. Isolated instances of failure in this phase of our recent military experience do not invalidate the claims made for the system. We must remember that the conditions were abnormal. Much was done under extreme pressure. Mistakes were undoubtedly made, but they were not inherent defects. Many of those which occurred in the early months were later satisfactorily corrected.

Compulsory military training will not bring the millennium. It is not a panacea for all the ills of our civic life, but I believe that wisely administered it may become a valuable adjunct to our present educational system in developing all-round, vigorous, right thinking, responsible citizens..

MALNUTRITION OF SCHOOL CHILDREN*

O. B. NESBIT

DIRECTOR OF MEDICAL INSPECTION
PUBLIC SCHOOLS, GARY, IND.

(NOTE:—The following outline and charts are used in presenting the question of malnutrition to pupils above the third grade. It holds their attention, and interests them, and is presented with a view of aiding those called upon to speak to children upon the subject. The outline and charts are of sufficient size that they may be seen by all present.

If the pupils know their weight and how much underweight they are it is more effective.

Charts 4 and 5 were two class papers selected from a domestic science class. The pupils were estimating the amount of energy consumed in the foods eaten the day preceding. Case 4 illustrates overeating and bad selection, also the absence of food value in tea and coffee. Case 5 illustrates underfeeding and excessive exercise.)

*Presented before the Indiana State Medical Association at the South Bend session, September, 1920.

MALNUTRITION

1. Def.—
   (1) Signs and Symptoms.
2. Cause—
   (1) Heredity.
   (2) Diet.
      (a) Insufficient food.
      (b) Unsuitable food.
      (c) Faulty habits of eating.
   (3) Fatigue.
   (4) Defects and disease.
      (Teeth, Tonsils, Adenoids and Tuberculosis).
   (5) Poverty.
   (6) Ignorance.
   (7) Lack of parental care.
3. Effects:
   (1) Physical.
   (2) Mental.
   (3) Moral.
4. Treatment:
   (1) Find cause—
      (a) Physical Examination.
      (b) Mental Examination.
      (c) Social Examination.
      (d) Scholastic Examination.
   (2) Make case plan—
      (a) Refer medical cases.
      (b) Place mental cases.
      (c) Refer social cases.
   (3) Education:
      (a) Methods:
         (aa) Spread information.
         (bb) Inculcate good ideas and good habits.
         (cc) Break bad habits.
      (b) Agencies:
         (aa) Regular course of study
         (bb) Special.
            Auditorium.
            Lunch rooms.
            Fresh air rooms.
            Rest rooms.
            Modify pupils' program
            Nutritional clinic and classes.
      (c) Object:
         Prevention.
         Cure.

IMPORTANT TEACHING POINTS

Foods and Eating:

Pure food.
Plain food.
Proper amount of food.
Regular meals.
Chew food well.
Pure water—proper amount.
Coffee and tea not food.
Pleasant eating surroundings.

Personal Hygiene:

Care of the teeth.
Wash hands before meals.
Care of the body.
Proper clothing.
Pure air in sleeping rooms—10 hours at night for underweight.
Rest to meet needs.
Exercise to meet needs.

CHART No. 1.

ENERGY REQUIREMENT
AVERAGE WOMAN

Kind of Activity:	Calories per Pound per Hour:
Sleeping	½
Sitting, reading, writing, etc	3/5
Standing	¾
Light exercise, dish-washing, cooking for 3-4	1
Moderate exercise, cooking for 6-12, hand scrubbing, etc	1¼-1½
Active exercise, heavy work	1¾-2

(ROSE—*Feeding the Family*).

ENERGY REQUIREMENTS

Age Years	Protein Calories per pound	Total Calories per pound		Total Calories average
5		35 to 37		1400 to 1700
6		34 to 35		1400 to 1700
7		32 to 34		1400 to 1700
8-9	3 to 4	30 to 35		1700 to 2000
10-12	3 to 4	28 to 32		1900 to 2100
12-13	3	25 to 30		1900 to 2200
14-17	3	20 to 25	girls	2200 to 2600
14-17	3	20 to 25	boys	2500 to 3000

(ROSE—*Feeding the Family.*)

CHART No. 2.

(Gains since November, 1919, to February, 1920)

SCHOOL No. 1.

2 pupils gained 8 pounds.
4 pupils gained 6 pounds.
5 pupils gained 5 pounds.
13 pupils gained 4 pounds.
10 pupils gained 3 pounds.
11 pupils gained 2 pounds.
5 pupils gained 1 pound.
5 pupils gained less than 1 pound or lost.
12 pupils absent.
15 pupils not doing well in December.

Total enrollment—202.

40 gained 126 pounds, from June to November (5 months). The same pupils gained 122 pounds, from November, 1919, to February, 1920 (3 months).

SCHOOL No. 2.

1 pupil gained 13 pounds.
3 pupils gained 8 pounds.
3 pupils gained 7 pounds.
12 pupils gained 6 pounds.
11 pupils gained 5 pounds.
12 pupils gained 4 pounds.
7 pupils gained 3 pounds.
4 pupils gained 2 pounds.
1 pupil gained 1 pound.
7 pupils gained less than 1 pound or no gain.
4 pupils absent.

65 Total.

CHART No. 3.

PERCENT OF PUPILS UNDERWEIGHT
BY SCHOOLS

School	10% Under	7-10% Under	10% Under	7-10% Under
Emerson	13.8 Mch. 1919	8 Mch. 1919	14 Feb. 1920	11 Feb. 1920
Jefferson	14 May 1919	2 May 1919	15 Mch. 1920	12 Mch. 1920
Beveridge	9 Nov. 1919	9 Nov. 1919		
39th St.	10 Nov. 1919	7 Nov. 1919		
25th Ave.	10 Feb. 1920	9 Feb. 1920		
Horace Mann.	11 Feb. 1920	10 Feb. 1920		
Miller	31 Nov. 1920	5 Nov. 1920		
Emerson H. S.	17 Feb. 1920	8 Feb. 1920		
Clarke	12 June 1920	10 June 1920		
Ambridge	18 June 1920	6 June 1920		
15th St.	11 June 1920	13 June 1920		
21st St.	8 Mch. 1920	9 Mch. 1920		
West Gary	15 June 1920	15 June 1920		

CHART No. 4.

CASE No. 1—G. P. Girl, 12 years. Height 59 in. Weight 121. Food requirements 2400 calories. Normal weight 91.

BREAKFAST

	Calories		Calories
1 egg	80	2 t. sugar	50
4 slices bread	400	Milk	165
2 t. butter	200		
2 t. apple butter	100	Total	995
1 cup coffee	0		

DINNER

3 balls hamb'ger	150	Apple butter	50
Milk	165	2 t. butter	200
5 slices bread	500	2 t. sugar	100
Potatoes	200		
1 cup tea	0	Total	1415
Gravy	50		

SUPPER

2 cups cocoa....	200	1 cup jello.....	400
Milk	165	4 slices bread....	400
Sugar	50		
2 t. butter.....	200	Total 1415	

Total Calories 3825
Food Need.....2400

Excess Carbohydrates.....1425

CHART No. 5.

CASE No. 2—G. P. Girl, 12 years. Height 55 in. Weight 64. Energy Requirements 2025 Calories. Normal weight 75.

BREAKFAST

	Calories
1 slice home made bread.....	100
Butter	100
Prunes	100
Total	300

DINNER

4 biscuits.....	200
Butter	200
Honey	100
Total	500

SUPPER

Beef steak.....	100
3 potatoes.....	300
2 biscuits.....	100
Gravy	50
Graham crackers.....	100
1 large orange.....	100
Total	750

Helpful material from following sources is hereby acknowledged:

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CLINICAL BLOOD CHEMISTRY TESTS*

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Analysis of blood from a chemical standpoint marks a comparatively recent advance in clinical medicine. At first this was done in a more or less cumbersome and crude way, but now with comparative ease and accuracy. It was hoped—and this hope has been in a way fulfilled—that analysis of the blood would give more definite and more accurate information about a given case than the excretions which had been relied upon before. For instance, in nephritis, it has been observed clinically, and has been abundantly proved experimentally, that urinalysis does not give very accurate information. In fact after much experimental observation McNider came to the conclusion that the quantity of albumin was no index whatever to the severity of the lesion. Some years ago during the discussion of a paper, Dock quoted from Thomas Fuller's article on "The Good Physician", thus: "The good physician trusteth not the single witness of the water if better testimony may be had, for reasons drawn from the urine alone are as brittle as the urinal. Sometimes the water runneth in such post haste through the sick man's body it can give no account of anything memorable in the passage, though the most judicious eye examine it." While the statement may be a trifle overdrawn, we cannot help but admit the truth of the statement in the main. Urinalysis may and often does give an idea as to the present destructive process going on in the kidney, but often gives no idea as to the amount of damage which has been done. Clinicians have been expecting for some time that there would be a test developed which would give the information desired. It is not a one test upon which we should depend but a correlation of the best tests with the clinical picture.

The objections to the tests as they were formerly done were:

First. That they required a large amount of blood, so much so sometimes as to render the test impracticable.

Second. That methods at first were crude and often inaccurate.

Third. That a large amount of time, energy and apparatus were necessary for the determination. These objections practically excluded the blood chemistry from daily use.

These methods now have been so much simplified that they are practically all micro-chemical determinations—very largely through the

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work of Marshall, Folin, Benedict and Van Slyke. While it is not necessary or practical that the clinician himself do the test, yet it is highly desirable that he know something of the technique so that he may know something of the shortcomings of each analysis, and the abundant opportunity for inaccuracy. Standard solutions need to be checked and rechecked in order to have accurate work. A feeble attempt has been made to demonstrate the technique of a few of the blood chemical determinations. A few charts have been arranged with curves to show the course of some cases chemically, along with some other data. It is by an assemblage of all the data that a more accurate diagnosis and prognosis can be made and the treatment of the case managed more intelligently.

One of the simpler tests and one which has found wide and valuable use, especially in the treatment of diabetes, is blood sugar. Well-regulated clinics now depend quite as much upon the blood sugar as upon urinalysis, and in fact in some cases more. In treating a case of diabetes it is often found that the urine may become sugar free, and so remain, and yet there may be present a very marked hyperglycæmia. Its value is illustrated by CASE No. 8733—a case of severe diabetes who at the time of having a urine sugar of 0.3 percent, or 3.6 grams in 24 hours, showed a blood sugar content of .27 percent. Twelve days later blood sugar was .23 percent, yet urine had been sugar-free seven days and carbohydrate intake was 29 grams. Certainly more concern would be exercised over such a case than one in which the reading was .12 percent under similar circumstances. While blood sugar is very important in the progress of a case of diabetes, fear of impending coma is always in the mind of one managing the case. This has been anticipated largely through examination of the urine for the acid bodies. Now some comparatively simple analyses are made of the plasma itself relative to alkaline reserve, as for instance—according to Van Slyke. Another is to observe alveolar CO_2 tension as measured by the Haldane method. In the above mentioned case coma was threatened clinically, yet alveolar CO_2 determination was 5.9 percent, or normal. P^H of blood at the same time was 7.55, or normal. The future progress of the case was very satisfactory for about 3 or 4 months, at which time he died in coma.

Recently some investigation has been done in cases of hyperthyroidosis as to blood sugar content before and after a meal of glucose. Briefly stated the method is as follows: The blood sample is taken for analysis while the patient is fasting, *i. e.*, before breakfast. Then a meal of 100 grams of glucose is given. Blood sugar is then followed over a period of 5 to 6 hours. Of course blood sugar curve rises very rapidly. Where the curve remains high over a period of 4 hours some significance is attached to the test. This in connection with the Goetch test, basal metabolism and the clinical picture, often gives us very desirable information. Accompanying are a few charts combining these tests. In some there is complete harmony—in others they are not all positive.

CASES

In CASE No. 9782, for instance—in the Goetch test the blood pressure rose from 110 to 128 systolic, a positive test. Pulse rate and systemic effect also indicated a positive test. On giving 100 grams glucose per os, blood sugar rose from .16 percent to .21 percent in one hour, though this hour's specimen of urine was negative for sugar. At second hour blood sugar was .17 percent; at four hours the same, with an accompanying glycosuria. At the end of six hours the reading was .15 percent. While the curve did not stay typically high, it is seen that the blood sugar with patient fasting was abnormally high—another indication of hyperthyroidism. Clinically, the patient had a cystoma of the thyroid with an indication of mild hyperthyroidism.

CASE No. 9811. Goetch test negative except for a slight sensation of tremor. Blood sugar mounted from .12 percent to .22 percent in four hours, though all urine specimens were negative for sugar. Clinical signs just sufficient to suspect hyperthyroidism.

CASE No. 9998. Goetch test negative. All clinical signs very positive of hyperthyroidism. Basal metabolism 48.4 calories per kilogram for 24 hours. Blood sugar .17 percent on fasting. In 2 hours after glucose .18 percent, and 4 hours .13 percent. No glycosuria. Goetch test and glucose test both not very strongly positive yet other findings very definitely positive.

CASE No. 10155. Goetch test positive. Basal metabolism 45.7 calories per sq. M. per hour. Blood sugar showed increase of .12 percent to .18 percent at the end of 5 hours. No glycosuria.

Here the value of many tests is at once realized.

Perhaps blood chemistry has found its widest application in the cardio-vascular renal group and urologic cases. How often is it found extremely difficult to determine whether the heart, blood vessels, or the kidneys are chiefly at fault and how severe is the lesion. As evidence of this groping about one has but to turn to the long list of various functional tests, in most cases as measure of the kidney work. Many of these had their day, only to fall into disuse or disrepute in a few years and other tests substituted for them. Rowntree & Geraghty in 1912

gave us the phenolsulphonephthalein renal functional test, which is regarded by clinicians as perhaps the best single test.

There is a smaller group of cases in which the individual is in a semi-comatose or stuperous state, in which blood analysis is of paramount importance in diagnosis, *e. g.*—

CASE No. 9971. A man 55 years of age, who experienced fainting attacks, unconscious attacks and general weakness. B. P. systolic 170, diastolic 110. Lips definitely cyanotic. No hyposthenuria, but fixation sp. gr. Phenolsulphonephthalein, 43 percent in two hours. Arteries tortuous. Creatinin content 4.16 mg. per 100 c. c. Blood urea 40.5. Ambard's coef. 0.148. McClean's index 29.2 percent.

Clinical picture with blood findings left no doubt but that the man was suffering from a latent uræmia. In this case blood chemistry played an important part in the diagnosis. Under treatment the case became symptomatically much better. Four weeks later the blood creatinin was 2.92 mg. Blood urea 23.4. Ambard's coef. 0.93. McClean's Index 73.9. In this case blood findings and clinical picture are exactly parallel.

In some of the urological clinics much importance is attached to the blood findings as an index to the operative risk of an individual. Of the nitrogenous products in the blood, uric acid is the first to be retained where renal damage has been done; urea second, and creatinin third, blood creatinin being the last of these bodies to be retained. A retention of such indicates considerable damage to the kidneys. Creatinin content of the blood is very easily determined and affords a very great asset in making a prognosis. It affords also much assistance in making a more accurate diagnosis as to the severity of renal lesion. Anything below 2 mgs. per 100 c. c. blood may be considered not pathologically increased; from 2 to 3 mgs. arouses our suspicions, and 3 to 5 mgs. indicates a grave prognosis. A reading of 5 or over indicates early termination of the case in death. In CASE No. 8865 of our series, the young man did not appear very sick. He was, however, on close examination, in much worse condition than appeared. He was somewhat anemic, had slight edema of the ankles, had marked retinal hemorrhages, and edema of the nerve head. Urine showed fixation of specific gravity; albumin 2 gms. per L. and a few casts. Phthalein output in two hours was zero. Blood creatinin found to be 14.8 mgs. Patient died in 10 days without coma. On the other hand—CASE No. 7992—age 59, showed the same urinary finding, with phenolsulphonephthalein of 28 percent in 2 hours and a blood creatinin of 3.6 mgs. Patient recovered and went home and returned next year with practically the same findings; again left hospital, and is now living in comparative comfort. As a rule, in our cases in which blood creatinin has been over 3.5, the case has terminated rather early in death. It has been shown by Myers that the creatinin content of spinal fluid runs parallel with that of blood.

The urea content of blood, as a rule, increases before the creatinin content, but variations from this are very greatly produced by diet. In experimental nephritis it has been found that urea is retained to a more marked extent in the glomerular or vascular type than in the tubular. Myers considers the chief value of blood urea to be in determining the course of treatment and progress of the case under treatment. For instance—in CASE No. 9559—the blood urea rises on increasing the protein of the diet and promptly falls upon its restriction. Clinically the case was continually growing worse. Creatinin increased from 3.2 to 3.9 in 7 days. Urea fell to 30 mgs. from 35. A week before death urea arose to 145 and creatinin to 4.1.

Urea content seems to show a quicker variation, while creatinin content is more constant. This is more fully exemplified in CASE No. 9745—a case of severe nephritis whose blood creatinin on June 15th was 3.09 and urea 53.4—showed on dietary and other treatment on June 21st, a blood creatinin of 4.17 and a blood urea of 49.5 with marked diminution in edema. On increasing protein in the diet, urea mounted to 65.4 in four days' time. The diet was restricted and the urea has been within normal limits since. Creatinin has also declined somewhat, though still distinctly above normal.

A few charts have been prepared following the creatinin and urea curves. A blood urea under 40 mgs. may be taken as normal. When it rises above this, one begins to suspect retention. Folin and Denis found that in cases of intestinal obstruction and in profound anemia from hemolysis that there was a marked increase in the blood urea. This very promptly fell in the cases which recovered. Myers in watching a series of cases found that a blood urea nitrogen of 20 mgs. made an operative procedure accompanied with more risk than one lower, and a reading of 25 mgs. was definite contra-indication unless there was emergency.

By a combination of blood urea and the rate of excretion of urea in the urine with other factors has given a coefficient (Ambard's) for which a great deal of importance has been claimed. It has been criticized from the standpoint of factors which are not accurate and the general mathematics involved in the calculation. However, where this has been followed, it in general follows the course of the other findings.

While our figures are not numerous, yet we have obtained some abnormally high readings where all other findings indicated normal renal function. An example of this follows:

CASE No. 10155—Mild hyperthyroidism in which Ambard's coefficient was run as a matter of routine and not because nephritis was suspected. Gave a reading of 0.161 considerably increased. Blood creatinin in this case 2.27 mgs. Blood urea 15.58. McClean's Index 24.8. Phenolsulphonephthalein 60 percent in 2 hours. The high Ambard's coefficient and low McClean was explained on the basis that patient voided large quantities of very dilute urine. In CASE No. 9971—it is seen that Ambard's coefficient and other chemical readings coincide.

In the analysis of our series it is seen in general that a phthalein output of about 30 percent or below in two hours is accompanied by a definite increase in creatinin content, and in many cases also the urea content. This seemed to be a sort of a general turning point, though phthalein output of 40 percent not infrequently showed some increase. In these cases also there was considerable change in the urinary findings and perceptible increase in blood pressure readings. It has been not infrequently observed that when edema increases, the blood chemistry readings decline, and as the edema disappears, clinical symptoms grow worse and the blood findings increase. These cases of course bear a much more guarded prognosis than those in which symptoms grow better and the blood values still remain low.

SUMMARY:

First. Blood chemistry gives us a valuable aid from the standpoint of diagnosis, prognosis, and management of our cases, especially those with a diabetic or nephritic tendency.

Second. It is not the one test but the correlation of a number which gives the most accurate information of a given condition.

Third. The methods of determination of the simpler substances are now reduced to practically micro-chemical analyses and can easily be carried out in a well kept laboratory in a comparatively short time, and with only a few c. c. of blood.

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DISCUSSION

CAPT. C. P. KNIGHT, U. S. P. H. S. (Jefferson City, Mo.): We have put on in Missouri an educational campaign and have done some educational work by means of nutrition clinics. We have examined over 17,561 children and have found that 59 percent of those children were under weight from 7 to 10 percent. Many of these children would not attend the clinics, but out of that 59 percent 4,076 did attend the clinics. We have instituted what we call the "Mother-Child" clinic. These children write an invitation in their own handwriting to the mother and request her to be present at the school on a certain day on which the clinic is to be held. The clinic is composed of the physician, a nurse, nutrition worker from the University of Missouri and a school worker. The reason we instituted the "Mother-Child" clinics was that by this method one would serve as a check on the other, the child as a check on the mother and the mother on the child. Children are apt to lie; if they are asked if they drink coffee they are likely to say "No, I never touch it", and the mother will say "Now, Johnny, don't lie to the Doctor". And very often, too, when we say to the mother, "Do you give the child milk?", the mother will be ashamed and will say "Yes", and the child frequently will say "Aw, maw, when did I get any milk?" (Laughter.) Right there we have a check in these cases and it is very helpful.

In a period extending four months we found that 71 percent gained two or more pounds over the normal rate of gain every month, 20 percent lost and 9 percent remained stationary. In looking over the ones that remained stationary or lost we found that many had not obeyed instructions and many had been sick with some acute illness or some infectious disease. But 71 percent actually gained because they carried out the instructions given them.

As to the causes of malnutrition, our survey has shown that one of the causes is the lack of water and fat soluble substances in the food, and not so much to the caloric value. We have seen these children increase the amount of diet and not show any improvement, but where they are given the greens, such as spinach and other fresh vegetables and cut out the biscuits and cakes, they have gained in weight. The children who have eaten the fresh vegetables and especially whole wheat foods have improved. I think that unsuitable food is the most important cause, and next comes the ignorance on the part of the parents. Next to that comes lack of sleep, and here the movie is the bad thing. We have found that a large percentage of those under-weight children are movie fiends. They are permitted to go very frequently to the movies and do not get a proper amount of sleep.

Our clinics are held once a month where the mother and child are seen. The mother returns at the end of the month and tells us whether she did or did not carry out the instructions given.

With regard to physical defects, I am of the opinion—I may be wrong—that physical defects are more symptoms of malnutrition than the actual cause, for the reason that of the total number examined, normals and overweights, 59 percent of these children had decayed teeth, 48 percent had enlarged tonsils and 25 percent the fatigue posture with symptoms of round shoulders, winged scapula and so on. Of the 59 percent of the underweight there were 40 percent with enlarged tonsils, 40 percent were mouth breathers, and 50 percent had posture defects. Therefore, a certain percentage with physical defects were not suffering with malnutrition. I do not mean to minimize the importance of having these defects corrected, but it seems to me that even with these defects the children will gain weight under proper management. The most important thing that we have found is the fatigue posture, winged scapula and the mental retardation of the child. One principal said that the greatest retardation in his schools was among the children that were 7 or more percent under weight.

We have tried to cover the state of Missouri, so you can see the problem we have been up against. We have covered about fourteen counties and have selected a moderate sized town in each of these counties. We have made a survey of only three typically rural districts and have found very little difference in the condition of the child in the rural district and in the town.

One interesting thing Dr. Nesbit spoke of was poverty as an influence in malnutrition. In this survey we have found out that the highest percentage is in the best schools and among the better class of pupils. The negro made the best showing, the "poor white" the next best. This is probably due to the fact that the parents with more money are more indulgent and the children have money for picture shows, for candy and ice cream and sodas, and consequently they lose their appetite for the regular meals and are not forced to eat.

This survey was made last year. This year we are organizing and getting the local communities to realize that the health of the children is their problem. We have approached all of the medical societies and put the problem up to them that they shall devote a certain amount of time to examining the school children and helping to improve their condition. All the

doctors are willing to cooperate and give a certain number of hours each year to this work. The American Red Cross furnishes the nurses in the communities that are unable to pay for them, but many of the school boards have put on their own nurses and pay them from their school funds. The University of Missouri, besides detailing fourteen Home Demonstration Agents for nutrition work, sends out three nutrition specialists to help in this work and supervise the work of the Home Demonstration Agents.

DR. HUGH MILLER (South Bend): Those of you who were on examining boards during the war were, I am sure, surprised and startled and depressed at the number of young men of draft age who were so defective physically, and not a few mentally, as to make them ineligible for service in our army, the army of a young and supposedly vigorous nation. This experience was not confined to any locality, any state or section, it was universal and consequently most serious. It constitutes, without doubt, one of the most serious problems before this country, and I am sure that no one who had the ugly situation forced upon their attention, as did the members of the draft boards, doubts that training, nation wide, instituted and carried on by the federal government is the answer. If one of our patients has a cancer we urge and insist upon its early removal. Then what of this malignant thing eating at the vitals of our country? What are we doing to bring the facts to the attention of the uninformed public and to our legislative bodies? Never, I believe, was the medical profession faced with a more serious duty, and so great and important is it that it calls for the closest cooperation and hence should, I feel, be undertaken by our national organization, The American Medical Association, working with such bodies as the Military Training Camps Association.

Dr. Ritchey has introduced a subject of tremendous importance. It is true, of course, that as long as our knowledge of the physiology of the kidney is as limited as it is our interpretation of kidney function tests must be made with considerable caution, but the tests in question have been in use long enough now to have demonstrated their value, remembering always that they are laboratory procedures to be considered as part of the evidence and always in conjunction with the clinical findings.

We have learned that the quantity of albumen in the urine gives us no clew as to the extent of involvement of the kidneys in a chronic process. Neither can the clinician estimate the pathology in the kidney in chronic nephritis by the clinical findings. So we welcome any test that gives us even an approximate idea of what work the kidney is capable of. In using these functional tests we should keep in mind the fact that the kidney is more than a simple mechanical filter, and so the fact that one substance is dammed back in the blood to an abnormal degree does not necessarily mean that the kidney threshold is high for all other substances. This being true it is very desirable that several tests be made if we are to get anything like a proper conception of the capabilities of the kidney in question.

DR. MILO MILLER (South Bend): Few of us have the opportunity of studying malnutrition under such circumstances and in such large groups as Dr. Nesbit and Dr. Knight have spoken of. However, there are not many in general practice who do not daily come in contact with the malnourished child. We have the same problems to face, and it is important to know how to recognize these cases and what to do. As has been pointed out, it is due to ignorance of food contents rather than to poverty. This is shown by the high incidence of malnutrition among the well to do. The poor nutrition cases usually occur more commonly in large families, and it has been shown that the malnourished child is more common in the native-born than among the foreigners. The relation of poverty is shown by the fact that when the food supply of the family is curtailed the child is the first to suffer because he needs food for growth as well as replacement of tissue loss. We all recognize that the thin child is less resistant to disease and has less to fall back on when he becomes ill. This is especially true in tuberculosis.

One thing we do not think of often enough and that is that the malnourished child if left to himself does not tend to become well nourished spontaneously. The percentage is greater among the fourteen-year-old than the seven-year-old children, so there is not much tendency to spontaneous recovery.

The chief solution of this problem, as pointed out, is undoubtedly education. At least a campaign of education must precede and accompany any plan of relief. Parents must be taught to give food well cooked and in the proper amounts. They must be taught that bulk cereals, like oatmeal, give the best results, and that every child must have milk. That nut margarine or margarine is just as nourishing as butter and costs about one-third as much. That tea and coffee have no food value and are of no good to the child. Mothers should be taught to cook food properly, and especially to avoid fried foods. Dr. C. Hendee Smith has said that the frying pan is the greatest single agency of evil in the kitchen.

It is easy to say that the child must take a rest period in the afternoon, but it is essential to tell him how to rest, that he must go into a quiet room where there are no other children, no toys nor books, and that he must completely relax. It seems to me that although it takes more time and much patience in treating these malnourished children, it is absolutely essential that written details be given to the parents in regard to every detail of the treatment, the amount of food, how it should be given to them, how much time they should sleep and rest. I believe every phase of the treatment should be written out for them to take home with them and not trust them to remember vague general advice. The talks to large groups of mothers has, I think, in the experience of eastern men especially, been much more efficacious than trying to handle cases individually. By teaching proper food habits and other essentials of health the schools should graduate their children physically as well as mentally fit, thus eliminating malnutrition as an unnecessary element of national weakness.

DR. WALTER D. HOSKINS (Indianapolis): The purpose of Indiana University in the study as outlined by Dr. Holland is a very commendable one. The paper of Dr. Nesbit was very illuminating. A corporation like Gary that will take up that kind of work inspires each of us to go back to our own communities and do something along similar lines.

The paper of Dr. Reed was extremely interesting, but I cannot agree with the idea that we should advocate compulsory military training. I do think that it is well to have systematic physical training. It is not necessary or desirable to compel our young men to undergo military training in order to develop physically.

The paper that covers the under-developed child is timely. If the rank and file of physicians in general practice can be awakened and made more alert and more effective in dealing with the under-nourished child we can be of great service to our community. We need to recognize not only the under-nourished child but also find the cause. I am convinced that unbalanced feeding, feeding between meals and too frequent feeding are the bad factors in the malnutrition of the child. It seems to me it has been clearly brought out here, too, in a very effective way, that we are not demanding that the rank and file of family physicians know all about the problem of nutrition, all about calories and just how much the child should have. Perhaps it is not in his province to achieve this. But we have had pointed out to us that there are those in nearly every community who have this information, and that it is available.

The work of the man that practices among children is being centered more and more upon the proper feeding of the child, the anticipation and prevention, as well as the correction of feeding defects. Let the physician himself be not backward in cooperating with the mother an the specialist in this. Let it not be said that the mother is better educated than the family physician as to the necessity for skilled supervision of the nutrition of her child.

DR. WILLIAM F. HOWAT (Hammond): Just a comment or two about Dr. Reed's paper. It seems to me we are still laboring under the dread of terminology. The phrase "compulsory military training" seems to arouse antagonism in every community. Perhaps it would be better if we emphasized it as "compulsory physical training"; this might sound better than "compulsory military training". The ends achieved would be the same, the ends sought after are the same. One other feature which Dr. Reed touched upon I think cannot be too much emphasized, and that is the dread in some of the public in regard to the moral deterioration that might be brought about by any compulsory military or compulsory physical training. I think the experience in the late war has absolutely demonstrated the fallacy of that. For the first time in history an army came back which was not a menace to the morals of the community and not a venereal menace to the community. The American army came back not a venereal menace but an example of what can be accomplished for good by means of proper discipline.

DR. JOHN N. HURTY (Indianapolis): In 1901 the schools were superficially examining into the health of school children, but in 1902 the State Board of Health passed a resolution that child hygiene was a subject of the greatest importance. The child is neglected in Indiana and the physician is largely to blame for that neglect. The physician knows and has known all these years that many children who are brought to him for treatment are under-nourished and not properly cared for. Gentlemen, we suffer more from our sins of omission than from our sins of commission. We omit too many duties. The Indiana State Board of Health took up the subject of child hygienic care, especially in rural regions. As a rule the farmer's family is badly nourished. They live principally upon a "fat-carbohydrate diet". They do not have enough green vegetables as spinach, and lettuce. I have eaten 368 meals at farmers' houses for the purpose of nutrition studies. We find upon their tables batter cakes, molasses, corn bread, potatoes, rice, beans, hominy, and coffee, leaving out the leafy vegetables which are so essential for growth and life, they all too frequently leave out

that great essential—milk. I have inspected children in one and two room schools and in many I have found 100 percent of the children deficient one way or another, all needing more or less medical attention. All had bad teeth; you can hardly find a child with perfect teeth. Bad tonsils are very common, and defective eyes, and defective hearing. At one school there were twenty-seven children, every one of them needing attention. One was a retarded girl aged sixteen with dementia precox. I wanted to see why the parents did not look after their children and why that girl with dementia precox had not been attended to. Awful to relate, the doctor had assured the parents that she would outgrow the strange symptoms. Think of that! I wish I had full time to tell you of certain experiences I have had in years of study on this subject.

DR. C. E. REED, Culver (closing): May I comment briefly on the other men's papers as well as my own? I am much gratified with the discussion of the work that is being done at the University and at Gary, showing the tendency for better care of the young people of the state. I have been interested in this problem for many years and am inclined to believe that the responsibility comes home to the general practitioner; not so much to the specialist in diseases of children, but to the family physician who comes in contact with the patients for one reason or another. When a physician is called into a family for mumps or measles he should have his eyes open and find out if there is not something else in that family besides mumps or measles, and his position will make him free to say that this or that condition should be corrected that the children may become better citizens.

Dr. Hurty has brought out a very fine thing. I was asked to help in the inspection of the children in our public schools three years ago, and I feel safe in saying that 75 percent had bad teeth, that 50 percent had diseased tonsils or other physical defects that anyone with half an eye should have seen, and those of us interested in that inspection took care to tell the parents these matters should be corrected.

In regard to compulsory training. Those of us who know anything about the examining boards know that many of the men went into the camps unwillingly, but after they were in the camp and found how much they were benefited they were glad they went in. There seems to be a timidity or reluctance about undertaking some of these things which, if the state advises, will ultimately result in good, and will react for good to those who are subjected to that regime. The sentiment is poorly founded, I am sure, and the idea that we are going to develop militaristic spirit in our people I am sure is wrong. I think I am well within the field when I say that less than 5 percent of the men who graduate from the distinctly military institution with which I am connected are engaged in any military career, and certainly after a man has carried around a rifle that weighs eleven pounds as part of his regular equipment for a long time does not hanker after it particularly. He has had enough. (Laughter.) But practically every man has said that he would not have given up the physical training and the mental and physical benefit he derived from it. One reason I stay with the school—there is not as much money in it as in some of the specialties—is because I am interested in seeing the men come out with straightforward countenance, good physique and of good, dependable character.

DR. J. C. RITCHEY, Indianapolis (closing): Just one point I wish to emphasize, and that is the importance of the correlation of a large number of the various tests in contradistinction to basing conclusions upon a single test.

DR. O. B. NESBIT (closing): I will leave on the table copies of cards used by us to record height, weight, age, and normal weight. Two cards are punched, one given to the pupil, the other retained.

We had a principal report that the undernourished pupils were poor in scholarship. Our department made a study of 106 underweight, 104 normal, from same classes as underweight, 65 overweight. We found that among the coffee users 46 percent of the undernourished, 34 percent of the overweight, and 69 percent of the normals in weight were good and excellent in scholarship. In those not drinking coffee 52 percent of the underweight, 52 percent of the overweight and 40 percent of the normals good and excellent. Superior scholarship is often a cause of malnutrition.

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FADS AND FASHIONS OF MEDICAL PRACTICE*

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The terms fad and fashion are related in meaning but vary widely in application. The former has rather a restricted significance. A fad is an individual thing largely, fashion has for its votaries a large number—sometimes the multitude. Fads are transient in duration; fashions extend over a longer period of time and exercise a wide-spread influence. Fads initiate new things which may in time gain the momentum of popular approval, entitling them to be called fashions; and succeeding fashion, the long

*Eleventh of a series of articles by Dr. Wynn which will appear regularly in THE JOURNAL.

continued use of a thing, a method, a habit, an idea, establishes it as a custom of the people.

The faddist is enamored of new things, but his affection for them soon wanes and his fancy goes chasing after some other flame which illumines his vivid imagination. In childhood this characteristic is dominant. It prevails in all of us to a greater or less extent. In some intensity of the trait persists throughout life.

The faddist is generally of the alert type, often artistic or strikingly intellectual. He has inordinate craving for mental stimulation. He is to be found in every avenue of human activity of the higher type. In the realm of literature he at one time develops unbounded enthusiasm for Kipling; presently it is the star of Tolstoy which is in the ascendant; for a time he pays extravagant devotion to Bernard Shaw; next bows before the shrine of Blasco Ibanez; and now makes deep obeisance to the poetry of Edgar Lee Masters. In the field of art his imagination finds greatest delight at one time in the works of the impressionist school; at another he is carried away with the grotesque productions of the cubists. The faddist prevails in politics, quick to condemn and abandon existing methods and just as quick to be caught up by some new and untried remedy for political ills. In the field of religion and education he welcomes with delight striking innovations. He views with ill-concealed disgust the conservatism of old methods.

The slow-going world is the better for these aggressive individuals who call attention to new and suggestive things, even if in the long run many of them are found useless or harmful. Faddists sow the new seed, but it remains for the conservative and more critical judgment of the average mass of mankind to harvest the good grain and cast out the chaff.

What then of medical fads? Being human, is it to be presumed that we are exempt from our full quota of faddists? Literature, art and music, being temperamental accomplishments, naturally have a large proportion of faddists. Medicine on the other hand, with its matter-of-fact ways of critical observation and analysis has less dreaming, and perhaps less faddists, and yet a surprisingly large number.

In not a few medical men faddism takes the form of raiment. What a delight they find in the newest cut of coat, or a stylish hat; or again the same impulse finds outlet in an impressionist style of new automobile. Let us admit this is simply personal vanity, not without virtue, however. Certainly it is less to be condemned than slatternly dress, or uncouth acts—ill-mannered affectation sometimes assumed by physicians, which is as much a fad as the stylish clothes of the dandy.

In others this same spirit of craving for novelty and distinctiveness takes the form of speech. Such a person discovers a new word in medical literature, which he parades as another would his stylish clothes. In pronunciation, too, he finds a favorite avenue of expression. Scarcely had we come to pronounce with ease the word *bacillus* when he proceeds with great emphasis to jar our ears with "backcillus". From a sojourn in the east he brings home the broad sound of "a" to clash with the short, flat "a" of our middle west so that when he says *class*, we scarcely recognize the word. He chants it with the same dignity that a choir would sing an anthem. These sallies of incidental instruction always rivet one's attention. But the medical man who is a votary of faddism in pronunciation, of course, runs great risk of diverting attention from the main theme of discussion. However, since it affords him such manifest pleasure and instructs his auditors, why should complaint be offered?

Akin to the pronunciation fad is the apparent delight an occasional physician takes in giving to a new sign or symptom the name of the author who has described it. How mystifying the name! Why rob the newly discovered sign of its charm by a common-place designation which would give inkling of its nature and recognition? He always refers to Grocco's sign; never to the para-vertebral triangle.

Faddism is inherent in most of us. It is chiefly a question of degree. Who for example has been able to resist the impulse to fly off at a tangent now and then in therapeutic procedure? A new remedy is promulgated from a great pharmaceutic establishment—heralded in suggestive phrases. The flare of promise illuminates our imagination. It is the temptation to gamble. We stake our hope on it. We prescribe it, talk about it and coddle ourselves into believing it is of value. Presently we see things more clearly, enthusiasm wanes, and by and by our pet goes into the discard. Then our attention is attracted to another therapeutic rocket fired into the professional sky. So one after another of these therapeutic will-o'-the-wisps is chased—phantoms which seldom bring substantial realization. The keen business acumen of the manufacturing pharmaceutic houses is constantly tempting us with these things. What infinite variety they place before us! Infinitude alone indicates the limit of new things they will continue to present to lure the unwary. Here is where most of us have been faddists—often to our later shame and the discredit of the profession. Who of wide experience can escape the charge of guilt in this respect? Should we not more generally resist the faddish impulse to therapeutic experimentation at the bedside?

Here of all places we should be governed by the work of painstaking investigators of pharmacologic products—able clinicians with ample facilities and laboratory men of sufficient ability to justify our faith in their conclusions.

Since the advent and multiplication of laboratory methods of diagnosis not a few physicians have become faddists in their use. I would not have the reader misjudge my estimate of the extreme value of these methods as aids, sometimes indispensable to diagnosis. The point contended for is that we have too often been prone to magnify their importance; not infrequently allowing them to push into the background other procedures of even greater value. The physician gets into the habit for a time of pursuing a one-track route to diagnosis, when he might arrive at the diagnostic haven by other roads, more certain if not so spectacular or short-cut. The aeroplane is the quickest route across the Atlantic, but steamship offers a safer passage. Too often we have faddishly emphasized the microscopic diagnosis of new growths, cultures for the recognition of diphtheria, gonococci for the recognition of specific urethritis, tubercle bacilli for pulmonary tuberculosis, Widal for typhoid, Wassermann for syphilis, x-ray for gallstones, and many other special technical methods, when our business as a physician taking a broad view of medicine should be, not to overload these special things with responsibility, but to assemble with care clinical data for the foundation and superstructure of diagnostic truth. Then let this be illuminated by every possible light of special medicine.

The study of fashions shows that they are uniformly wavelike, beginning in a small way, rising gradually to a crest of popularity, and then receding into disfavor or abandonment. The chief psychologic forces making for their growth are, first, the universal craving of the human mind for novel excitement and entertainment. Secondly, through the massed suggestion of numbers, reacting upon each other, the wave of popularity is given tremendous momentum. The life cycle of fashions is variable. Style of dress in the feminine world is rapidly changeable—less so among men as note the century-long popularity of the dress suit. Less frequent but just as characteristic are the wave-like movements in the manners of social life—the forms of salutation, speech and written address, the changes in dancing and other recreational amusements. Needless is it to multiply illustrations. It matters not what particular field of human activity is considered, the same psychologic elements of fashion will be found present directing and controlling to a large extent those who make up that following. The medical profession, therefore, is governed by the same laws of fashion as other classes of society. True our scientific training should make us less susceptible to fashion waves, yet close analysis of the facts shows that we are much like other folks.

The influence of fashion in medical practice is well-nigh irresistible. The mass suggestion, the fact that professional opinion is running one way, leads most of us to drift with the current. It is not merely that other physicians are doing thus and so that we fall in with the majority; the laity push us into the current with the humiliating taunt that we are laggers or slackers if we do not get into the swim. The principle is the same as that which compels us to change the style of our clothes or be considered queer and a back number.

Almost every new style in medicine has had some practical or scientific basis for its inauguration. Beginning in a small way, its volume increases to a flood, carrying the rubbish of misuse or abuse, followed by subsidence of the wave of professional approval, or perhaps the drought of abandonment. Only a few of these are offered in illustration. Nearly all of them relate to therapeutic procedure. They carry some good just as they are impregnated with some bad—representing the wobbling, struggling effort of fallible human beings toward better things. The problem of prime importance in regard to any fashionable movement in medicine is to conserve in the end the elements of good—and guard against the natural reaction of condemnation and abandonment. Some of these movements are limited in extent and transient in duration; others take deep hold upon the profession, become the universal practice, and so established in respectability that not to follow them is to be a medical heretic.

A very dominant medical fashion during the early part of the past century was phlebotomy. Any practitioner who ventured to question its value was professionally ostracized or condemned as derelict in duty. For many years it held sway as the most useful therapeutic procedure. Such was the verdict of careful students and practitioners of the time. Yet note the gradual decline of its popularity and final abandonment. Are we to conclude that they were entirely mistaken in their judgments? On the other hand are there not very good anatomic, physiologic and pathologic grounds for performing phlebotomy in certain cases—as for example uremic coma, cerebral hemorrhage associated with high blood pressure? Yet who has the courage in these days to advise phlebotomy? Strange is it not that so intelligent a profession should be so dominated by reactionary prejudice?

The overweening pursuit of drug therapy has constituted more than a fashion. It has become a dominant professional custom, bolstered up

by prejudice which it is difficult to shake off. Born centuries ago in an age of mysticism, even time and unemotional science have made slow progress in getting the light of progress through the thick skin of our superstitions. The lay-world bows before the shrine of drug therapy—looking longingly for the Fountain of Perpetual Youth or a mysterious potion which will work a miracle within the body. These words are not to be construed as a condemnation of drug therapy *in toto;* but a plea for the use of drugs upon proved, rational grounds. The driving impulse to search after the mysterious potion which will restore health is not unlike the human longing for life hereafter. The *urge* points toward truths which may sometimes be revealed. In drug therapy a few precious revelations have been made. Experimental pharmacology in our own day has brought to light many therapeutic facts of extreme value. Let the search go on, to bless coming centuries with other discoveries, wrought out of patient experimental toil. But this does not justify the profession in making a fetich of drug therapy, as do laymen who are biased through the inherited mysticism of past centuries. The quack recognizes this tendency of the race, and accordingly makes appeal to credulity through the mysteriousness of his nostrums. Pharmaceutic manufacturers cater to this same racial tendency in the medical profession, inundating us with proprietaries and new products bearing alluring titles and suggestive promises.

Polypharmacy has constituted the most conspicuous aspect of drug therapy and its worst sin. Even to the present day its influence is felt in the complex formulæ of proprietaries and official compounds, although a strong and wholesome tendency exists toward simplicity in drug administration, not characterized by the enthusiasm, however, which entitles it to be called a fashion.

A fashion of the last century growing out of, and in a measure succeeding to, multiplicity of compounds was magnitude of dosage. "Doctors of the Old School", still amongst us, tell interesting narratives of the large doses formerly employed, notably in the administration of mercury. In protest arose the sect of Hahnnemann advocating minimal dosage and specific medication—erratic extremes in opposition to prevailing practice. This served a useful purpose in breaking the high wave of excessive dosage and nauseous mixtures. So has come to decline this therapeutic fashion.

As the wave of fashion for large dosage and bulky, nauseous mixtures subsided, another arose, supposed to correct the old abuse—namely, coated pills and tablets. Three important agencies have combined to promote the popularity of this type of medication. First, patients preferred tablets to the nauseating compounds; secondly, they proved a convenience to physicians, especially those who were compelled to do personal dispensing; and thirdly, the pharmaceutic manufacturers seized upon pill and tablet production as a lucrative avenue to business success. That this plan of drug administration has distinct advantages entitling it to a place of permanency cannot be doubted. Admitting its virtues it is just as important to give serious heed to dangers lurking in the method. Who can deny for example that the manufacture of innumerable formulæ in pill form has tended to destroy initiative and skill in the art of prescribing? In the next place the multiplication of manufacturers has put upon the market many pills and tablets which are inert; or even granting virtue in their composition, they may be so combined, dessicated or compressed as to render them insoluble. Very recently a most intelligent patient made special request that I should not prescribe tablets made by a very well-known pharmaceutic establishment because on two different occasions he had found the tablets passing by the bowel almost unchanged.

A very real danger is that the physician will acquire the pill-vending habit. He becomes more a tradesman than a physician. It encourages office dispensing which at first thought looks attractive, but in the end leads laymen to think of the doctor as a man peddling wares. They naturally reach the conclusion that they pay for medicine rather than advice. The ultimate effect is a lowering of professional prestige. Pill and tablet prescribing is a prevalent fashion which calls loudly for reform. It is producing in the ranks of the profession a host of therapeutic nihilists. Out of the infinite variety of tablet formulæ which clutter his office the physician comes finally to lose respect and confidence in drugs. He drifts into the attitude of saying to himself, "Oh, well, one thing will do as well as another." The urgent call of the hour in regard to this fashion of our time is not for abandonment of tablet therapy but for the production of trustworthy products and simplified composition. And above all else, the pill and tablet craze should not be permitted to usurp the place of art in prescribing other things and methods which will better achieve the relief of the patient.

In Jenner's great discovery, with its scientific suggestiveness and vast practical benefits, the soil was fertilized for the growth of even greater rewards in the prevention of disease and the advancement of therapy, through the revelations of pathology inaugurated by Pasteur and his followers. The outcome has been the rapid

development of the system of biochemical therapeutics. Antitoxine led the way. Its great practical value in the cure of diphtheria once proved, hope was aroused for similar benefits in other infectious diseases. It attracted at once the most noted pathologists, pharmacologists and clinicians, who have been endeavoring to work out scientifically the control and cure of different infections along similar lines. Great pharmaceutic houses have expended enormous sums in the erection, equipment and manning of laboratories for the purpose of manufacturing biologic products for the treatment of disease. Antitoxins, serums and vaccines of infinite variety have been produced. An expectant profession has been taught to have faith in these things notably by their experience with diphtheria and tetanus antitoxine; also from the occasional aid by the judicious administration of tuberculin in incipient pulmonary tuberculosis, as well as some other forms of Koch infection; again by the obvious benefit noted in some types of gonococcus infection; and quite markedly in certain kinds of local infections by autogenous or even stock-vaccines, when the general body resistance is good. These conspicuous achievements have caused the wave of biochemical therapy to rise very high in professional esteem. Encouraged by experience to have faith in the movement it is not strange, therefore, if the profession should be dazzled by the brilliancy of accomplished things, and go blindly about the further application of the plan in therapy. This form of treatment has become an overweening medical fashion of our day and generation. As in other fashions may it not be true that we are now being borne upon a wave of enthusiasm in which unwarranted excesses are being committed? The injection of a foreign protein into the body is never to be taken lightly. The indiscriminate use of vaccines especially is not only unscientific, it is senseless and fraught with grave danger. Of course no account is here taken of those who use vaccines with venal intent—merely because popular, spectacular and a form of therapy in which considerable fees are possible. Such a person is no better than the most arrant quack. This appeal is made to the man who is carried away by the wave of popular approval of this form of therapeutic procedure. The injudicious and unscientific application of the treatment can only bring harm to many patients and embarrassing discredit upon the profession. The tocsin here sounded then is greater caution in the use of these measures. Make sure that all the indications are present calling for their application—then use them, but with the care which will avoid harm and insure benefit to the patient.

The Council on Pharmacy and Chemistry of the American Medical Association has done a conspicuous service in trying to correct the harmful trends in vaccine therapy. The volume soon to be issued by the Association will prove a most valuable and reliable guide to the profession in this popular and useful phase of therapy.

For consideration last has been reserved a medical fashion destined to wield greater influence than any which has preceded—operative surgery. From century-old practices of the art, it has arisen triumphantly in spite of deepseated lay-prejudice. Bacteriology first laid the foundation for aseptic surgery, and experience soon emboldened the operator in surgical attack. So dashing have been the battles won that not the profession alone but the world as well, stands in awe and admiration of the achievements. So won over to operative procedure is the public that now the layman's query in perplexing cases is apt to be: "Would an operation offer relief in such a case?" Thus has grown faith based upon works. Among general practitioners the ultra-conservative have been driven by popular opinion to espouse more aggressive, life-saving tactics; and some practitioners have been charged by a critical public as slackers and laggards in the professional procession because slow to accept the surgical route to relief.

The final yielding of the reactionary elements in medical practice to aggressive surgery has come about chiefly through the slogan of focal infection. With the rising wave of surgical fashion, one after another anatomic region has been invaded by the knife, with sanguine hope of relieving both the local and the general symptoms. Amongst these may be mentioned in sequence the ovaries, tubes, appendix, gall-bladder, tonsils and teeth, each of which has been charged with blame for the systemic manifestations. Often the accusations proved true for relief followed attack upon the suspected focus. In such cases we justly congratulated ourselves upon the wisdom of the course pursued. But we must be just as honest in acknowledging failure in not a few cases—in truth some show an aggravation of general symptoms (in the heart, joints, kidneys, etc.) and in a few, grave conditions are provoked. Let us not then with thoughtless minds or unfeeling hearts make unseemly haste to advise surgery. One needs not to search far to discover in the evolution of this fashion, excesses which shame us as we look back at them. Who will ever be able to compute the ovaries which were uselessly sacrificed two or three decades ago? In the light of this experience does it not behoove us at this time to inquire if perhaps in the matter of the tonsils and teeth we are not repeating the same unwarranted slaughter of parts which should be more frequently conserved?—Let not these words be

construed as a protest against justifiable surgery; rather let it be considered an earnest appeal for that thorough study of cases which warrants surgical procedure. In proof of the contention here made three examples may be cited from the records of patients admitted to the Robert W. Long Hospital during the month of February, 1921. The histories of these cases show a long list of operations, all performed in other institutions with one exception—tonsilectomy.

Case I. S. M. Single Woman.

At age 23, cystic ovary removed on the right side.

At age 24, left ovary, tube, and appendix removed because of pain in the side. A sinus resulted which required several operations to secure healing, extending over two or more years.

At age 25, one breast was amputated, because of tender and infected lumps.

At 27 the other breast was removed for similar conditions.

At age 30, admitted to the Robert W. Long Hospital. Complaint, pain low down upon either side; nervous and hypochondriacal. Chronic amygdalitis diagnosed—tonsils removed. Discharged unimproved.

At age 31, readmitted to hospital, pains of indefinite nature through bowels; occipital headache. Discharged unimproved.

At age 32, readmitted to hospital, complaining of pain in the stomach and bowels. Final diagnosis: psychasthenia with mental inferiority.

Case II. J. S. Male. Appendectomy in 1916.

June, 1919, operated for suspected gall-bladder trouble, and again in December, 1919, for adhesions, supposedly following the previous operation.

June, 1920, another exploratory operation was done in an eastern hospital, without finding anything definite.

February, 1921, patient was admitted to the Robt. W. Long Hospital showing all the typical subjective and physical symptoms of a tabes dorsalis; and with serological findings, positive.

Case III. E. G. Male. Appendectomy in 1916.

Operated in July, 1917, for duodenal ulcer; gastroenterostomy done.

November, 1917, plastic operation done to relieve contracture.

June, 1918, duodenal ulcer excised.

May, 1920, old gastroenterostomy cut off, and gastro-jejunal ulcer excised.

February, 1921, admitted to Robt. W. Long Hospital. His symptoms beginning in 1916 have not in the least been relieved by any operation. All serological findings are positive of lues; and he is now suffering from typical crises. Query: Have not all the symptoms and lesions been syphilitic? Five of the six operations have been made by surgeons known most favorably throughout the country.

These errors, superficial study of cases and precipitate appeal to surgery, constitute the gravest danger growing out of the dominant fashion for operative relief. In the long run it can but react harmfully upon legitimate surgery.

Besides these sins of omission and commission, are there not perhaps other dangerous channels into which the prevailing fashion may be leading? For example whilst the strict application of asepsis makes the able operator bold, it is apt to lead the incompetent to reckless extremes, resulting in human sacrifice. The simplicity of aseptic and surgical technique in the main has tended to produce an army of technicians, without breadth of surgical grasp or the wisdom of surgical judgment. False standards are set up, cheapening both the art and science of the profession. The call of the hour is not for less technicians but for more real surgeons, who pin their faith to a working knowledge of anatomy, physiology, surgical pathology and the ability to deal with problems and emergencies in the light of this knowledge. Subsidiary to these, but very important of course, is thorough training in the mechanical phases of the art.

Begotten of surgical fashion, is observed not rarely, the sin of arrogance. Surgery has dramatic appeal to the lay-mind. The egotism of the operator is fed by popular acclaim. The less spectacular general practitioner sometimes becomes moody and envious, charging the public with ungratefulness. The surgeon is prone to conceit and self-sufficiency. Who would have the temerity to question his wide experience? He has seen hundreds of cases of appendicitis; why then should the general practitioner suggest the possibility of beginning pneumonia with pain referred to the abdomen? Would it not be interesting to know how many gall-bladders have been drained in tabetic cases with abdominal crises? The writer can enumerate a considerable list. Sometimes the general practitioner is justly blamed for dallying when aggressive surgery would save life; and I can say with equal truthfulness that I have seen perfectly healthy ovaries, appendices, tonsils and teeth removed. That these things happen is neither to the credit of the one nor the other. The exhortation is for greater diagnostic care and closer cooperation.

An outgrowth of the prevailing surgical fashion in quite a few men has been the development of the vice of avarice. The trend toward big business the world over has too often taken hold upon the surgeon. The modern hospital with its equipment and system has enabled him to concentrate and facilitate his work. It offers likewise better opportunities for scientific endeavor, as well as surgical relief. It is an evil day for him if once he becomes infected with the germ of avarice, for the malady is difficult to cure. His constant thought then becomes "big business"—many cases and large income! Assistants make preparatory study of his cases and take entire charge of the post-operative management. He is prone to lose personal touch with patients and develops into a cold-blooded materialist. He becomes a brilliant technician and operator, known to the lay-world chiefly by his fabulous income. His career takes on the mercenary aspect. He loses in skill of scientific approach to the operative attack and fails to cover disease retreat against the dangers arising in convalescence—thus neglecting one of the main principles in first class generalship. Fine assistants he may have (perhaps better than the chief himself), but the point is that he is passing for something that he is not. The three indispensible links of operative surgery are: thorough diagnostic study, the mechanical phase or operation and the post-operative management. "Big business" prompted by avarice will seek to get by with the operative link only. This is not fair to the patient; it is worse for the surgeon who is neglecting the intellectual, judicial and human side of surgery for its mechanics, its narrow materialism and "big business".

It will be quite generally admitted I think that the outstanding fashion of medicine for our own day and generation is operative surgery. That it has shed imperishable luster upon the profession who can deny? But like any rising wave of fashion, some drift is carried along with the fine ships of achievement borne upon its crest. This is to be expected in any case, remembering the fallibility of human wisdom and human judgment. Is it not meet therefore that we should take counsel one with another about the dangers? Most of all is it not incumbent upon those prominent in the surgical field to sound the note of warning? Is not the human body a sacred temple of which we are the earthly custodians? Shall we permit defilement of this sanctuary without due preparation and reverence for its wonderful mechanism? Does every new focal symptom constitute sufficient warrant for rushing to vaccines or surgery without adequate study of the case from every angle, with a summary of conclusions, justifying the one or the other procedure? In other words the route which every conscientious practitioner should follow is that of painstaking, scientific inquiry and not always the highway of fashion. There may be other roads safer, better and more direct to the haven of health for the sufferer. Our highest duty is to ascertain by careful search the best route and pursue this steadfastly.

SALIGENIN AS A LOCAL ANESTHETIC FOR THE FEMALE URETHRA

ARTHUR D. HIRSCHFELDER and H. M. N. WYNNE, Minneapolis (*Journal A. M. A.*, Dec. 25, 1920), assert that saligenin is a practical, nontoxic, local anesthetic which is distinctly useful in work on the female urethra and bladder. It is about one-fifth as toxic to mammals as procain, and about one-fiftieth as toxic as cocain. In all cases, 2 c.c. of a 4 per cent solution of saligenin was injected into the urethra. A working anesthesia was obtained in every case, apparently as satisfactory as that produced by a 10 per cent solution of cocain. There is a great advantage in using this anesthetic of low toxicity, for a considerable quantity of the solution can be injected into the bladder after catherization. This reduces the spasm so that a rapid and satisfactory examination can be made.

ACTION OF CASCARA SAGRADA

HUGH MCGUIGAN, Chicago (*Journal A. M. A.*, Feb. 19, 1921), does not agree with the view usually set forth in textbooks that cascara sagrada is an ideal drug and fool proof. He would confine its use to those cases in which from 1 to 2 Cc. has a definite action. Larger doses would seem to do more harm than good. They may produce an inflammatory condition of the bowel, with pronounced nausea and griping. The nausea may be produced by the therapeutic doses recommended in some textbooks. It only rarely leads to vomiting. Cascara should be used only as a laxative, never as a cathartic. When more than 2 Cc. of the fluid extract is needed to produce a laxative effect, another drug should be added or substituted. Small doses several times a day seem to give better results than the sum of these doses given in a single dose.

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EDITORIALS

CANCER INFECTION

Of the unsolved problems of medicine there is none which offers a more inviting field than the etiology of cancer. And despite the endless amount of scientific investigation that has been pursued for decades by the best medical minds in the world, we seem about as much in the dark as ever, as to the ultimate solution of this knotty problem. However there has been acquired a vast fund of valuable information which, even though much of it be of a negative kind, will finally lend tremendously toward the end sought.

Many promising clues have in the past been relentlessly pursued only to find that in the final analyses, the answer was not there. Among such may be mentioned Cohnheim's theory of embryonic origin, Hauseman's "anaplasia", Ribbert's "tissue tension", Adami's "habit growth", "heredity", etc. Each has been proven to have its fallacies, and for many years the failure of experiments at transplanting human cancer from one person to another has been accepted as proof of the non-transmissibility of cancer from person to person, despite the success of such experiments upon the lower animals. The theory of long-continued local irritation becomes attractive by the illustrations of the smokers' cancer, the cancer of the betel-nut chewers, that of paraffin workers, chimney sweeps, cancer of the breast, more common in those races where the breasts are covered and pressure exerted by the clothes than in those whose breasts were left uncovered and exposed to the air, a fact brought out by W. J. Mayo[1].

Electric irritation, as in x-ray workers, and heat as in workers in certain trades and the Kangri burns of Kashmir causing cancer of the abdominal skin under the charcoal warmers worn over the abdomen, are credited with an etiologic valuation. W. J. Mayo is not averse to ascribing to hot drinks and food a place among the causative irritative factors in cancer of the alimentary tract, particularly gastric carcinoma where there is already provided the acid medium so favorable to the growth of cancer.

One of the most interesting among the recent articles upon the subject is that of Ochsner[2] on "Cancer Infection", wherein he calls attention to the fact that only patient perseverence revealed the tubercle bacillus, the spirochæte of syphilis, the bacillus of leprosy, the plasmodium malariæ, etc. Hence we should not accept a negative answer as final in the search for an organism that fulfills Koch's postulates upon the cancer problem. He recalls the fact that cancer occurs almost exclusively in those portions of the body exposed to outside irritation, including the gastro-intestinal tract which is constantly in contact with filthy food in locations in which stasis insures long-continued contact and persistent irritation. Cancer of the stomach is common in manure-eating people, i. e., those eating raw vegetables growing in soil fertilized with night-soil or with barn-yard manure. Such condition maintains with the Japanese who eat abundantly of such vegetables and with the Chinese who fertilize their gardens with human excrement, in both of which races there exists a high incidence of carcinoma of the stomach. On the other hand the people of India with their uncleanly skins are frequent sufferers from cancer of that appendage. Likewise barn-yard fowl and pigs, both feeding upon manure, if they survive young life, are very prone to cancer. Dogs, rats and mice are subject to cancer while animals that eat more cleanly food, like the rabbit, seldom have it.

Marine and Gaylord developed cancer on the gills of fish living in ponds infected with excrement, while control animals in pure water remained free from the disease.

In that part of Luckau where human excrement is extensviely used for fertilizing vegetable gardens, Behla found the populace severely afflicted with cancer.

Ochsner believes the most convincing argument for the infectiousness of cancer to lie in the studies of Smith, who has proven to the satisfaction of most competent judges that cancer in plants is due to a microorganism which he has been able to isolate and cultivate and which produces cancer when inoculated upon healthy plants.

On the other hand, C. H. Mayo very pertinently observes [3] that "in taking a general survey of the various theories and reviewing the clinical evidence, it would seem that not one, but several conditions are essential to the development of cancer. The influence of heredity probably does not extend beyond an inherited cell weakness in which extra demand on the

(1) Mayo, W. J., Surg. Gynecol. Obstet. Vol. 26, No. 4, p. 367.

(2) Ochsner, A. J., An. of Surg. Vol. 73, No. 3, pp. 294-301.

(3) Mayo, C. H., An. Surg., 1919, LXX, pp. 237-240.

cell for division may early exhaust its controlling agent. The great influence of local irritation, which in some instances is undoubtedly chronic infection, is a fact quite generally accepted. No one theory, however, can account for the change in the cell that causes it to adopt lawless existence and to lose its harmony with community life."

THE RECENT LEGISLATURE AND THE MEDICAL PROFESSION

The attention of our readers is called particularly to the list of bills published in this issue, affecting the medical profession, which were introduced at the recent session of the Indiana legislature, and also to the roll call on House Bill No. 267 in the lower house. In all, thirteen bills were presented, including one amending the present law in regard to trained nurses. The latter bill was the only one passed and signed by the governor. House Bill No. 267, the substance of which was indorsed by the Indiana State Medical Association at the last annual session, was the one in which the profession and the public were most deeply interested. The bill presented amended the present law by inserting the words "or the healing art" in the old law after the words "practice of medicine, surgery and obstetrics." This change was intended to strengthen the interpretation of the scope of the old law. The other feature of the bill presented merely involved annual registration and payment of $2 for the purpose of enabling the State Board of Medical Registration and Examination to maintain a correct list of physicians actually licensed and in practice in Indiana, and to afford a fund to prosecute those who violate the law. At present it is impossible to keep trace of those who have been licensed; many of them are dead, others have moved away, and quite a few have retired, and, in some instances, the name and license of such individuals have been used by others. It is impossible to keep trace of the quacks, itinerants and other humbugs unless we can have an annual registration, and it is impossible to enforce the law without there is a fund for that purpose. The theoretical notion of some physicians that the state should pay for the prosecution and enforcement of the law may in one sense be correct, but practically, it is utterly idle. The chiropractors, not one of whom has a legal right to impose upon the public and collect fees for their alleged professional services, have nevertheless shown a commendable spirit in one respect—that is, willingness to spend plenty of money to fight legislation affecting them unfavorably, and to promote legislation which they desire. It is regrettable on the other hand that some of the members of the Indiana State Medical Association are not willing to pay the small pittance annually which would secure enforcement of the law and would put these pretenders out of business. P. T. Barnum was right when he said, "a fool is born every minute." It is amusing, as well as deplorable, to see how many people are willing to run after every new fad and willing to spend their money freely for the purpose. Chiropractors claim to have but one single therapeutic resource,—that of their so-called "spinal adjustment." They find plenty of people who are in need of suggestive therapeutics for imaginary and sometimes for real ailments who open their pocketbooks and cheerfully allow the chiropractors to "pull their leg" for the privilege of having their neck pulled. Not one in a hundred of those outside of the medical profession has any comprehension of the significance of therapeutic suggestion and very few doctors appreciate its real value when honestly and intelligently used. Hence the fraudulent use constantly flourishes.

Owing to the illness of the Chairman of the Committee on Public Policy and Legislation, active efforts to secure the passage of the registration bill were not undertaken until the session was almost half over. If substantial progress had been made with it at the beginning of the session, it probably would have passed.

The chiropractors had a member of the legislature in the person of one of their cult from Allen county, and they have spent several hundred dollars, including the practically constant attendance upon the legislation of two of their attorneys, and they introduced a bill in the Senate and one in the House. There was no difficulty in defeating their bills. The one in the Senate proposed the creation of a special Board of Chiropractors, and provided absolutely no educational requirements prior to their entrance to the so-called chiropractic schools. In the House a bill was introduced proclaimed as merely a definition of chiropractic, but which Representative Kingsbury rightly denounced as a fraud because it proposed not only to define chiropractic and exempt it from the operation of medical laws, but also to permit anyone to practice chiropractic without any educational requirements whatever.

Since the creation of our present medical law twenty-five years ago, the Indiana State Medical Association has done wisely in emphasizing the fact from the very beginning that its purpose was to establish and maintain high educational standards, and so far as the State Board of Medical Registration is concerned, its chief function was to advance the standard of education from year to year so as to maintain as nearly as possible harmony and uniformity with the general advancement of medical education

as expressed in our best medical schools and in the best laws adopted in other states. Under our constitution in Indiana our medical law is classed as a police regulation. This makes it incumbent upon the local prosecutor in each county to prosecute those who violate the medical law, and it also makes it incumbent upon every county medical society to see that the local prosecutor does his duty. The Attorney General of the state has nothing to do in prosecuting an automobile thief in a distant county in a state, but the prosecuting attorney in the county where the theft occurs is compelled to do so. The integrity and the ability of the county prosecutors, and the loyal support of the medical profession in each county will determine the success of the enforcement of our present or of any other medical law. It is gross class favoritism and a violation of the law to permit a "chiroquacktor" or any other quack, to practice without submitting to the same requirements that others must comply with.

The "chiroquacktors" had rather rough sailing in the recent legislature. They came to the bat rather confidently, in view of the fact that they had a member of their cult in the lower house and two attorneys constantly on the job, but their senate bill introduced early never survived the hearing before the Committee on Public Health, where its fraudulent character was mercilessly exposed by representatives of the Indiana State Medical Association. No objection was made to anybody being a chiropractor if he so desired; but insistence was made that every one assuming the serious responsibility of treating the sick should have ample educational preparation. No lower standard for chiropractors should be adopted than that which is enforced upon all others who now obtain license to practice the healing art.

The Ross bill in the lower house had its neck unmercifully wrung and its "spinal adjustment" very much disturbed by Representative Kingsbury, who denounced it as a fraud and a sham, and declared that its author had endeavored to convey the impression that it was simply a definition of chiropractic, whereas in fact it was both a definition and an enabling act and would have permitted anybody to practice chiropractic without any education whatsoever.

While it is not always possible to secure progressive legislation, it is generally easily possible to prevent lowering the standard. The average legislator is not willing as a rule to put himself on record as favoring class legislation or taking a backward step in educational matters.

California and Louisiana require an annual renewal license fee of $2, and North Carolina requires an annual registration of $5, while Delaware requires an annual commercial license fee of $10, as shown by an abstract of the medical laws and board rulings published by the American Medical Association in 1919. The medical laws are notably well administered in these states, and it will be possible to do the same in Indiana if we have annual registration and a small fee to support and enforce the law.

FIGHTING THE CHIROPRACTORS

There is no question but that the chiropractors are a distinct menace to the public as a direct result of their ignorance and incompetency, and their willingness to attempt to alleviate any kind of sickness or physical abnormality through what they call "adjustments". They are shrewd enough to realize that the only way that you can make quackery and fraud profitable is through publicity brought about by advertising. The propaganda that has been started by chiropractors and spread by the public press during the last few years, and more especially during the last few months, illogical, inconsistent, false and deceptive as it has been, has resulted in a rather widespread popularity for the cult and its fake treatment, though we believe that this popularity for the most part is confined to people who are either naturally mentally warped in their judgments, or thoughtless when it comes to the selection of attention for ills or physical abnormalities.

No doubt the chiropractors as well as other pseudo-medical cults would not have gained any foothold had the regular medical profession taken any steps to educate the public concerning the fallacies of a so-called treatment that is based upon such false premises. Medical men have been so afraid that they might say or do something that will be misconstrued as advertising themselves that they have permitted all sorts of fiction concerning themselves and concerning the art and science of the practice of medicine and surgery to develop and grow strong and popular with the people without a word of protest, and without the slightest effort to put the public in possession of the facts. The old saying, "Truth is mighty and will prevail," sounds well enough, but sometimes it is a long time before truth prevails, and in the meantime a lot of damage is done that could be prevented if those who know the truth would only make themselves heard. It is scant comfort to the mother who has lost a child from diphtheria in the hands of the chiropractor to find out, when the health board steps in, that she has made a serious mistake in employing an ignorant quack to care for a disease that is fatal in less than 2 percent of the cases when attended by a competent practitioner of medicine.

The question arises as to just how much the regular medical profession owes the public in

the way of offering advice and protection. If we owe the public anything at all we certainly owe it a frank statement as to those questions concerning public health which we know to be true, and if there are those who are preaching and practicing fraud, then it seems to us that it is the duty of the medical profession to expose the fraud. The charge probably will be made that any efforts on the part of the medical profession to suppress chiropractic is based upon jealousy or retaliation, and therefore may be counted as persecution of a new cult that does not happen to believe the same as we do. However, we owe something to the public, and even though we know that chiropractic will die a natural death, just as all other fraudulent medical teaching and practice has died, yet those who are losing health and perhaps lives, to say nothing of being swindled and imposed upon when curable or remediable illness or physical imperfections are being trusted to chiropractic manipulation, deserve protection, and the only way they can get it is through the aid of the medical profession which is able to furnish the truth concerning this monumental fraud.

There is a difference of opinion as to whether the chiropractors should be prosecuted for practicing medicine without a license, and in most states chiropractors are law breakers, or whether the medical profession should begin a campaign of education with the end in view of letting the people know the ignorant and fraudulent character of the practice that is being used under the name of the chiropractic to delude and swindle the people. We are convinced that the venality of the public press is responsible for every swindle, chiropractic included, so perhaps one of the best ways to put chiropractic out of business is to show newspaper editors and proprietors how they are not only a party to a swindling game, but are directly aiding and abetting law breaking when they boost the chiropractors' game. An appeal to an editor's conscience will have no weight, for the average newspaper editor has no conscience when it comes to a question of dollars and cents, so the best way to reach him is to make him understand that in the long run he is dollars ahead if he refuses to aid in promoting the swindle, and he will have the added satisfaction of having a clear conscience.

Concerning this question of propaganda, we are inclined to sanction the suggestion made by the Grant County (Indiana) Medical Society in which, discussing the exploitation of chiropractors and its menace to the public, they say:

"We believe these propagandists have achieved a prominence through their extensive publicity where they have become a menace to all national and state health programs. 'A lie is a lie until it's in print and then it's the truth.' They print their falsehoods and the public can not judge.

"We believe there should be a plan evolved, a nation-wide plan, to present medical facts to the public which will enlighten the public on health topics and meet the falsehoods of all propagandas which endanger public health.

"We believe that the American Medical Association should develop this plan, and should employ the best talent in the country to assist in getting it before and keeping it before the people. We believe if the American Medical Association took up this work seriously, and evolved an efficient but dignified program, that the county and state societies of the country would co-operate with them and arrange their budgets accordingly."

No doubt a little spasmodic effort here and there is not going to accomplish results, and therefore the suggestion that widespread and persistent efforts to check the chiropractic exploitation is the only way by which the problem can be met successfully.

Quite another plan of attacking the chiropractic "humbug" is that adopted by the Washington County (Indiana) Medical Society, which very recently has published in the local newspapers an authentic account of the Rubin case, and has decided to fight chiropractic, which has gained a foothold in their midst, in the manner suggested in a resolution unanimously passed and made public in the newspapers:

RESOLVED: In order to protect the public from its own carelessness, or its negligence, the medical profession is frequently called upon to assume a stand which directly opposes the wishes and desires of some members of the community. We note this antagonism in case of epidemics that if unchecked would cause great suffering and loss of life. We now feel that a greater menace exists than that of an epidemic of disease. You are besought through colorful advertisements of half truths, alluring promises of miraculous cures, to place your precious possession, your life, in the hands of men unskilled in the art of healing, and ignorant both of the principles that control the body in health, and of the pathological manifestations in disease.

Since the day that Eve yielded to the blandishments of the devil, to the present time, men have been misled by alluring promises and brazen falsehoods, and have parted from their most precious possessions with little chance of ever recovering them.

We feel it our duty to protect you from the follies and dangers of all fakirs and confidence men who profess to deal in special and miraculous cures.

To this end we feel we should apply the surgeon's knife; and we hereby announce that since it is your privilege to employ whomsoever you please to relieve your distress when you are ill, we also reserve the privilege of waiting upon you only in so far and for so long as you may accept our advice.

And we wish to advise those who are believers in and boosters for chiropractics, that from and after this date we shall expect you to call upon the chiropractor for ALL your ailments, or for none; and that hereafter when the chiropractor has a case that is going to die we will refuse to assume any responsibility in the case, and that we will not sign the death certificate for the chiropractor as has been done in the past.

We do not want your business, and shall most certainly be too busy to look after you.

MEMBERS WASHINGTON COUNTY MEDICAL SOCIETY.

This seems like adopting heroic measures, but it will win providing the members of the Washington County Medical Society observe the intention of the resolution in every particular. We confess that we have a sneaking suspicion that some weak-kneed or treacherous member of the medical profession in Washington county will fail to carry out the intention and purposes of the resolution, through fear of losing the friendship of some of his patrons, though more particularly through fear of losing a dollar or two. If a radical stand like that mentioned is justified, then it is worthy of being upheld, and as long as the medical men in Washington county have decided that their radical stand is justified, then it is up to them to uphold the stand and to make it decidedly uncomfortable for any of their members who become backsliders and who should be given to understand that it is better to lose a few dollars or even a few friends than to lose self-respect.

We shall watch these chiropractic fights with considerable interest, and for the reason that we have been trying to arouse the medical profession from a state of lethargy that has made it possible for every kind of medical quackery to thrive, even at the expense of the medical profession itself. In fact, notwithstanding all of our improved medical measures and our higher standards of medical education, the country today is afflicted with more quackery than ever before in its history, and the one and only reason that quackery thrives is because medical men have been "asleep at the switch" and have not heeded the warning that we and many others have long been trying to have recognized.

THE DIVISION OF FEES

The division of fees, or fee-splitting, is the buying and selling of patients. The practice exists in various forms, but the most usual form is as follows: A general practitioner makes a diagnosis in which surgical interference is indicated. He then refers the patient to a surgeon for operation. The surgeon operates, collects a fee and sends to the physician one-third or one-half of the fee, this last transaction being unknown to the patient. Sometimes the physician collects the fee "for the surgeon" and retains his percentage as agreed with the surgeon. Sometimes the fee is divided with the explanation to the patient that the physician "assists the surgeons" or gives the anesthetic. In many instances the explanation is a subterfuge for fee-splitting. A competent surgeon requires a particular assistant and an anesthetist accustomed to his work, the best way to do his work and the surgeon to whom he refers the case to assist him. Undoubtedly the physician should be paid for the study and diagnosis of a surgical case, but he should be paid directly for this service by the patient. In the same way the surgeon should be paid directly by the patient. The surgeon can frequently be of service to the physician and to the patient by explaining to the patient the value of the study and diagnosis made by the physician. But the accounts of the physician and of the surgeon should not be confused or rendered to the patient as a single statement. The evils of fee-splitting are, first, that it makes for incompetent surgery. The surgeon who is party to the practice gets his cases usually not upon the basis of merit, but upon the basis of the percentage of fees collected that he will give to the practitioners. The more incompetent he is, as a rule, the larger a percentage of the fees he gives to his co-fee-splitters. Second, fee-splitting makes for unnecessary surgical operations. Under the fee-splitting system surgery becomes a commercial enterprise and not a professional service. Both the physician and the surgeon tend to make surgical diagnoses without adequate study, and the result is unnecessary surgery. Much of the unnecessary surgery of our present day is due directly to fee-splitting. Third, fee splitting, by introducing dishonesty into medical practice, lowers the entire medical profession in the estimate of the public. The fee-splitter, for example, says to his patient that he refers him to a most competent surgeon, when he knows well enough that if he, the physician, were to be operated upon, he would select another surgeon. Further, the fee-splitter usually poses before his patient as having received little or no fee for his services when, as a matter of fact, he has received a large fee indirectly from the patient. He holds such a fee really as a theft. The great majority of physicians and surgeons are eager to put an end to all fee-splitting. They ask hospital trustees to help them in this matter by excluding fee-splitters from the privileges of practice in hospitals.—*Bulletin American College of Surgeons*, January, 1921.

DECEPTIVE CHIROPRACTIC ADVERTISING

The Indiana chiropractors took advantage of the opportunity offered to advertise themselves in connection with the Rubin case at Waukegan, Illinois, and as might be expected the advertising contained the most vicious lies that could be manufactured. The chiropractors unqualifiedly stated that the Rubin girl had a strange malady that medical specialists were unable to diagnose, that she was on the point of death when a chiropractor gave her a treatment which

produced almost instantaneous relief, and that within a few hours she was as healthy and happy as anyone.

The facts are that the Rubin girl had encephalitis, so diagnosed by her physicians. The period of excitement which had been a feature of the case was disappearing before a chiropractor saw the patient at his own request. The chiropractic treatments did not produce any change in the patient's condition, but made her so much worse that she begged to be relieved of the torment produced by the treatments. The several "adjustments" given by the chiropractor made the patient worse instead of better, and at the time that the chiropractors and the newspaper allies were announcing such a miraculous cure, the child was still in a precarious condition, though the disease was running about the same course as others of similar character.

The worst feature of the episode is that the public has been fed on a lot of falsehood and deception in connection with this Rubin case, and the public press has been a party to the fraud. We wonder when the time will come that the average newspaper editor will have a conscience, and a sense of honesty that will correct serious mistakes when he makes them. The chiropractors as a class are a lot of ignorant impostors who are deluding and defrauding the public. They are being aided at the present time by those newspapers that cater to sensationalism for profit. It is high time that decent and rational minded people take some measures to protect the public from not only the chicanery of medical quacks and pretenders, but the dishonesty of the public press.

REMEMBER HOW THEY VOTED

On the only vote on House Bill No. 267, the bill approved by the Indiana State Medical Association, on which a roll was called, the following showing is interesting. The vote was on a motion to strike out the enacting clause, which, of course, would have killed the bill. Those voting to strike out the enacting clause, as shown by the report of the roll-call, were:

Representatives:
William B. Anderson, Knox and Pike Cos.
Murray S. Barker, Boone Co.
R. U. Barker, Posey Co.
R. K. Bedgood, Tippecanoe and Warren Cos.
Sam Benz, Crawford and Washington Cos.
Clarence O. Buller, Madison Co.
W. M. Coapstick, Clinton Co.
David M. Curry, Sullivan Co.
Chester A. Davis, Jay Co.
J. I. Day, Lake Co.
James Delaplane, Carroll and Cass Cos.
Frank H. Duffendach, Dubois and Orange Cos.
C. Pralle Erni, Floyd Co.
James Filbert, Owen, Green and Sullivan Cos.
Geo. W. Freeman, Howard Co.
Thurman A. Gottschalk, Adams Co.
Sherman Hall, Jackson Co.
George W. Hansell, Pulaski and White Cos.
Robert B. Hougham, Johnson Co.
Jeptha Humphries, Shelby Co.
George H. James, Clay Co.
E. W. G. Johnson, Monroe and Brown Cos.
Henry W. Kamman, Vanderburg Co.
Charley Kares, Vanderburg Co.
Lawrence Leer, Elkhart Co.
Noble Malott, Lawrence Co.
Floyd D. Miller, Elkhart Co.
Ray C. Morgan, Henry Co.
Mrs. Julia D. Nelson, Delaware Co.
Jay J. Overmyer, Lake and Porter Cos.
Charles E. Richardson, Cass Co.
Nathaniel Ross, Allen Co.
John Shurmeier, Vanderburg and Warrick Cos.
Charles L. Tilden, Allen Co.
Claude A. Smith, Gibson Co.

The following list contains the names of those who loyally supported the Indiana State Medical Association and higher medical standards by voting against striking out the title; they shall be gratefuly remembered by the medical profession and the public:

Representatives:
Henry Abrams, Marion Co.
Oscar A. Ahlgren, Lake Co.
John L. Benedict, Marion Co.
Otto Roy Beyler, St. Joseph Co.
Dr. Geo. W. Boner, Daviess and Martin Cos.
M. T. Calef, St. Joseph Co.
Albert B. Clapp, Clark Co.
J. P. Cronin, Wells and Blackford Cos.
Dr. O. A. Delong, Bartholomew Co.
Otto G. Fifield, Lake Co.
Theo. T. Gaesser, Perry and Spencer Cos.
Ray V. Gibbons, Madison and Tipton Cos.
Willis E. Gill, Putnam Co.
Clinton H. Givan, Marion Co.
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The members absent or not voting were Representatives:

George H. Cooper, Hancock Co.
Donald M. Coppock, Miami Co.
Thomas H. Cox, Marion Co.
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EDITORIAL NOTES

ESPECIAL appreciation is due to Representative Kingsbury and to the three physicians who were members of the legislature, Drs. DeLong, Phillips and Boner, as well as to Representative Harrison and others who were sympathetic with the ideals and purposes of the medical profession.

THE United States Public Health Service has published, under date of February 11, 1921, a special article on epidemic encephalitis, commonly called "sleeping sickness," and those who are interested in the subject may obtain this article by writing the Treasury Department, Washington, D. C.

St. Elizabeth
have issue

28. Representatives from the staff of every hospital in the state are urged to be in attendance.

THIS is the time of the year when the doctors can be of service in recommending clothing to suit the varying changes of temperature. One day it is very warm and the next day it is very cold. These sudden changes in the atmosphere demand changes of clothing to correspond to the changes in temperature. It is just as harmful to have too much clothing as it is to have too little clothing.

THE protection of maternity in infancy is a laudable enterprise, but we do not believe that the federal government should take up the burden which only will add to the long list of paternalistic enterprises that the "uplifters" are foisting upon our already overtaxed Uncle Sam. Only confusion and chaos can result from such multiplicity of socialistic featurse as are being foisted upon the federal government.

ONE of the members of the recent legislature, a mechanic, stated to a representative of the Indiana State Medical Association that before he left home to come to attend the session of the legislature he had been approached by a chiropractor who seriously advised him to give up his trade and become a chiropractor. He said he was told, "Why don't you take up chiropractic and make lots of money out of it? It is the greatest graft on earth."

DR. DAVID ROSS, President of the Indiana State Medical Association, made a fine impression on the Senate Committee on Public Health, in the hearing on the Senate bill proposing to create a separate chiropractic board with lower educational standards, when he emphasized the disastrous results that have followed the manipulation of the spine in certain tubercular cases and when he further emphasized the basic necessity of an understanding of pathology before attempting to treat disease.

THE State Medical Society of Wisconsin will celebrate its seventy-fifth birthday by holding a "Home-Coming" meeting in Milwaukee, September 7, 8 and 9, 1921. All former Wisconsin men, whether they have practiced there or left Wisconsin to study medicine, practicing elsewhere after graduating, are invited to this home-coming. The officers of the society are anxious to secure at this time, for mailing purposes, the names of all former Wisconsin men. They will confer a favor by sending their names and addresses to Dr. Rock Sleyster, Secretary, Wauwatosa, Wisconsin.

THE sponsors for the Michigan scheme to place the medical and surgical department of the Michigan University in competition with the regular medical profession of the state, seemed to have side-stepped the question when they heard from the rank and file of doctors throughout the state of Michigan. It remains to be seen whether the scheme, which is one of the finest trump cards that could be played by the advocates of state medicine, can be pulled off in Michigan, and the doctors in Michigan delivered hand-cuffed and gagged to the Medical Department of the Michigan University. Thank kind fortune the Medical Department of Indiana University has no such scheme of brigandage in view, and for that matter we believe that the dean and the medical faculty of our own state medical school are working for the betterment of the medical profession rather than to kill it.

YE gods! Now the chiropractors have a rival, and the disciples of the new cult are called sanipractors. We do not know the nature of this new form of swindle, in the cloak of the healing art, which seems to have been foisted upon the public first in the far West, but may be counted upon to reach the East, but suffice to say, we soon shall find the new cult knocking at the doors of our legislatures for recognition as a distinct school of medicine and its disciples worthy of legal recognition by licensure. Inasmuch as some of the ancients considered that most diseases arise from the stomach, we wonder why some enterprising chap has not started out to develop a school of bellypractors who attempt to extract disease by rubbing the abdomen while at the same time they skillfully extract dollars from the pocketbooks of the luckless victims. But how do the chiropractors feel since their toes are being trod upon? Will it not be another case of "freeze out" similar to the history of the osteopaths who are little heard of now?

THE hospitals and the medical profession of Indiana are under lasting obligations to Senator Harold Van Orman of Evansville, who made a forceful speech against House Bill No. 445 and stated that every hospital in Indiana would be demoralized in its discipline if this bill should be passed and that many of them would be closed. The proponents of this bill had the assurance to ask the legislature to pass a bill which would compel every hospital to allow any pay patient to select his own physician and to operate upon him whether qualified or otherwise, the only condition being that the physician called should be a licensed practitioner. The hospitals have been too often imposed upon already by those aspiring to do surgery and to specialize in certain lines without adequate preparation or experience. The American College of Surgeons is wisely emphasizing the fact that only competent and experienced men should be permitted to do surgery in our general hospitals, especially those meeting the approval of the American College of Surgeons as standard hospitals.

WE voiced our criticism of President Wilson when he promoted his personal physician to a higher rank in the medical department of the Navy, and, for similar reasons, we criticise President Harding for promoting his personal physician to a higher rank in the Army. In the first place it is unfair and unjust to promote a man over the heads of many who perhaps are his superiors, and that sort of thing is very apt to demoralize the morale of our institutions. Our presidents should not be denied the right to select and retain their private medical advisors, and in view of the fact that the health and life of our President is of the utmost importance to the nation, we ought to furnish him every safeguard, even to the attention of his private medical advisor at the nation's expense. But to promote the President's personal physician to an Army or Navy position to which he is not entitled, and for which he may be illy-fitted, is the height of absurdity, and Congress should take means to prevent it by creating a position that carries with it merely personal medical attention and advice to the President.

THE Merchants Association of New York, through its Committee on Pollution and Sewerage, has started a vigorous anti-fly campaign for 1921. In literature sent out it states that the unusually mild winter presages a season that will be favorable to the development of the house fly, which is such an active agent in the spread of disease germs. The winter hang-over flies already have made their appearance in considerable numbers. The literature being sent out refers in particular to the Easter House Fly concerning which the following is offered:

The Easter House Fly is more deadly than other flies. It is the progenitor of many billion swarms. To kill just one Easter fly now means that there will be fewer billions to kill this summer. If you don't kill it now you are endangering the life of your babies and yourselves.

The danger threatened by the germs of the new fangled diseases that may be brought by the thousands of immigrants now coming to our shore is a menace that demands our greatest vigilance, and the fly can be depended on to see that a widespread distribution of the germs is made when they arrive. It is not inappropriate for physicians in Indiana to use their influence in this anti-fly campaign.

EVIDENTLY there is either friction or jealousy in the ranks of the promoters of the League for Medical Freedom for we now hear of another society known as the American Medical Liberty League with a few sponsors who formerly seemed to be ring leaders in the League for Medical Freedom. Evidently the cranks who are promoting the new society are able to command considerable money, for it costs something for postage and printing to send out the letters and circulars that now are going broadcast over the country. As usual with faddists and fanatics, distortion of facts and even downright dishonesty in promulgating lies, is offered as argument to bolster up what is termed medical liberty in opposing vaccination and the use of any kind of serums or vaccines. A sample of the rot that is being sent out is the statement that several scientific statisticians in this country and Europe have produced evidence which shows that not only is vaccination worthless but positively harmful, and that vaccinated persons are more likely to have small-pox. They also condemn anti-typhoid vaccination on similar grounds, and have the temerity to claim that the death rate from influenza can be directly traced to vaccination.

DR. W. N. WISHARD, Chairman of the Committee on Public Policy and Legislation of the Indiana State Medical Association, at the committee hearing on the Chiropractic Bill, called especial attention to the fact that chiropractors have but one single therapeutic resource which they attempt to apply to all cases they treat. He declared the benefit resulting from chiropractic to be chiefly due to suggestion, and illustrated suggestive therapeutics by the story of a lad who did not want to go to the seashore with his parents for a summer vacation because he had to travel on the cars to get there and such journeys invariably caused him to be "car-sick." On the day before his departure for the seashore, he was given a small dose of methylene-blue with the confident assurance that if it turned his urine blue within a few hours that he might be assured that he would have no car-sickness. The child came to his mother a few hours later with a perfectly radiant face and cried, "O, mother, it's blue, it's blue!" His mother reported to the doctor later that the child had had no car-sickness on the journey, and now though grown to young manhood, he has never had another attack. Dr. Wishard added that tactful suggestion was a therapeutic agent as old as the history of medicine, and that honestly and wisely applied, it was of great value, but that the legislature would hardly feel justified in establishing a special state medical board for the licensing of those who limited their practice to the administration of methylene-blue or any other single therapeutic fad, suggestive or otherwise.

ACCORDING to *Northwest Medicine* we learn that the Washington Legislature has developed something new in lobbying. Instead of using persuasive arguments and convincing logic the drugless lobbyists (chiropractors and sanipractors) have adjusted the spines of most of the legislators. Boosters for one or the other schools of healing have steered legislators to rooms at the leading hotel, where deft spine mechanics have relieved so-called dislocations, subluxations and nerve impingements which were hitherto undetected and unsuspected by the "patients." The attractive feature of these treatments was that they were free. It did not matter that many who succumbed to the sales talks of the boosters were in perfect health before their spines were surveyed and straightened. They went amiably to the adjusting rooms under the belief that it might do some good anyway. Others, prompted by the talks of the chiropractic and sanipractic runners, discovered aches and pains of mysterious origin which were soothed away by the vigorous manipulation of their vertebrae.

We are surprised to think that the chiropractors did not think to adopt such a plan of action in order to impress the Indiana legislators with the value of spine adjustments. The Indiana chiropractors might have gone the Washington chiropractors one better by manipulating the spines of our legislators to the music of a jazz orchestra, and the entertainment might have been made still more attractive by serving tea and a light luncheon. Inasmuch as the chiropractors are great on advertising we really are surprised that they have overlooked some of these valuable stunts in promoting their interests before the Solons who have so recently returned to their homes from Indianapolis without giving official recognition to the chiropractic school.

ACCORDING to a general report, the Wisconsin doctors are having their troubles with the dreaming and impractical socialists who are making an attempt to qualify all christian scientists, napropaths, osteopaths, chiropractors and other pseudo medical cults, to sign death certificates, prescribe medicines, and have a representative on hospital and dispensary staffs. Already a bill has been introduced in the Wisconsin legislature to place christian scientists on an equal footing with surgeons in relation to the Workman's Compensation Act. Well, as we often have said, these conditions arise purely and alone as a result of the "holier than thou" attitude of medical men who feel so sufficient unto

themsleves that they are above and beyond the practice of educating the public concerning the dangers and pitfalls of quackery in every phase of irrational medical thought, teaching and practice. As has been stated by the editor of the *Illinois Medical Journal,* March, 1921, "The growing enslavement of the medical profession has reached an acute stage. If the medical societies of the land, city, county, state and nation, were alert as they should be, and would exercise the influence that they really could, and if their officers were in general more alive to their responsibilities and exercised the power these organizations possess, a halt would soon be called to the everlasting meddling by politicians and derailed menopausics with the practice of medicine. Compulsory Health Insurance and similar schemes are sponsored and supported by the parasitic nonproducers, such as the cities are filled with, together with professional politicians, reformers for revenue, amateur reformers, derailed menopausics, social workers, trying to decide what is good for somebody else. It would be a blunder to place in the hands of the government the functions now efficiently handled by private citizens. Do not let us violate the laws of good government by placing in the hands of these impractical people matters that require sound judgment for their successful operation. State Medicine, the Nation Socialization of Medicine, the Practice of Medicine by State Universities, and Social Insurance all foster and bring about autocracy and bureaucracy, and destroy individualism. Autocracy, like monopoly, is bad for the country. Bureaucracy destroys industrial development. The lack of necessity to hustle is bad for the future of the country. Individualism is never so good and sound and healthy as when, like a chicken, it must do a certain amount of scratching for what it gets."

DEATHS

AMANDA RECORDS, widow of the late Dr. Samuel Records, died March 14 at the home of her daughter in Indianapolis, aged 78 years.

MARY LEATHERS CLEVENGER, wife of Dr. William F. Clevenger of Indianapolis, died March 17 following several months' illness.

E. F. BEARDSLEY, M.D., of Alexandria, died March 2, aged 60 years. Dr. Beardsley graduated from the Chicago Homeopathic Medical College in 1886.

CHARLES H. PARSONS, M.D., aged 66, died of paralysis on March 5 at his home at Rushville. Dr. Parsons graduated from the Bellevue Hospital Medical College of New York in 1878.

JOHN D. GREEN, M.D., Manilla, died February 26 following a stroke of paralysis. Dr. Green was 56 years of age, was born at Arlington, Indiana, and graduated in medicine from the Louisville Medical College, Louisville, Kentucky, in 1897. He was a member of the Rush County Medical Society and the Indiana State Medical Association.

ELMER T. SHERWOOD, M.D., Linton, died February 20, in Florida, where he had been spending the winter. Dr. Sherwood was 62 years of age. He graduated from the Missouri Medical College, St. Louis, Missouri, in 1882. At the time of his death he was secretary of the Green County Board of Health and was a member of the Green County Medical Society, the Indiana State Medical Association and the American Medical Association.

RUSSELL T. OLMSTEAD, M.D., of Versailles, died March 25, aged 70 years. Dr. Olmstead was born in Cincinnati, Ohio, and graduated in medicine from the Ohio Medical College in 1879. He had served on the Board of U. S. Pension Examiners for 16 years, as county health commissioner for 16 years, and, during the late war, was a member of the county board of examining surgeons and assistant food inspector for Ripley county. He was an active member of the Ripley County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES

DR. A. V. HINES of Auburn fractured his right wrist on March 8 while playing volley ball.

THE residence of Dr. C. W. Schwartz at Huntingburg was seriously damaged by fire recently.

DR. S. C. LORING of Plymouth suffered a stroke of apoplexy recently, but is making a satisfactory recovery.

DR. O. E. GLICK of Kentland has been appointed local surgeon for the Pennsylvania Railroad Company.

ACCORDING to announcements, construction will begin soon on the colored unit at the Irene Byron Tuberculosis Hospital, Fort Wayne.

DR. B. O. BURRESS of Alfordsville has been appointed County Health Commissioner, succeeding Dr. A. I. Donaldson, recently deceased.

ON January 19, 1921, a group of American physicians headed by Dr. S. M. Schmidt, sailed for Poland to aid in checking the epidemic of typhus in Poland.

DR. W. J. FERNALD of Frankfort has removed to his farm on Wild Creek, northwest of Frankfort. He will continue his practice at Frankfort as usual.

DR. G. W. H. KEMPER of Muncie, who has been spending the winter in California, is much improved in health and expects to return to Muncie about the middle of May.

A BOND issue for $80,000 for the construction of the Blackford County Hospital has been approved and the Board of Trustees has submitted plans for the building to the Board of State Charities.

REAR-ADMIRAL E. R. STITT has been made Surgeon General of the Navy to succeed Rear-Admiral Braisted, retired, the appointment having been confirmed by President Harding and the Senate.

DR. GUY D. BAKER suffered extensive loss on March 2 when his office building at Crandall was destroyed by fire. The main business part of the village of Crandall was wiped out by fire on the above date.

DR. J. W. DICKERSON of Wingate, who has been a patient in the Methodist Hospital at Indianapolis for several months, was removed to his home on March 4. Dr. Dickerson is totally disabled from paralysis.

THE state of Ohio is waging a state wide campaign for complete birth registration. A number of physicians in various parts of the state have been prosecuted and convicted and the campaign is still being pushed vigorously.

REAR-ADMIRAL CAREY T. GRAYSON, who served President Wilson as personal physician during his term of office, has been ordered by the Navy Department to duty as officer in charge of the Naval Dispensary at Washington.

DR. JOHN F. BARNHLL of Indianapolis announces that he has associated himself with Drs. E. L. Lingeman and Byron Lingeman in the practice of laryngology and otology. Offices are located at 241 North Pennsylvania street, Indianapolis.

DR. A. M. SULLIVAN of Attica is leaving this month for New York, where he expects to spend some time in post-graduate work. He is taking his family with him, and probably will re-locate in some larger city after completing his post-graduate work.

THE Board of Directors of the National Tuberculosis Association met at the Claypool Hotel, Indianapolis, on March 11 to formulate plans for national anti-tuberculosis activities for the coming year. Notable public health workers from several states were in attendance.

THE Vanderburg County Medical Society was entertained by the staff of St. Mary's Hospital, Evansville, on March 7. Fifty physicians were present. Papers were read by Dr. Sidney J. Eichel and Robert W. Viehe. A luncheon was served by the Sister Superior and nurses of the hospital.

AT the annual meeting of the medical staff of St. Joseph Hospital, South Bend, Dr. Henry J. Graham was elected president; Dr. Leo P. Van Rie, vice-president, and Dr. J. B. Wiland, secretary. The reports for the year show that the hospital has treated 370 patients, which surpasses previous records.

THE Union Hospital of Terre Haute has received from Mr. and Mrs. Martin Sheets a fine old capacious residence with ample grounds located conveniently to the hospital, which is to be remodeled and known as the M. A. and S. C. Sheets Home for Nurses to be used by the Union Hospital Training School for Nurses.

THE United States Civil Service Commission announces competitive examination on July 1 for Associates in Clinical Psychiatry and Psychotherapy, the salary being $2500 per year. Applicants should at once apply for Form 2118, stating the title of examination desired, to the Civil Service Commission, Washington, D. C.

MISS EDNA L. FOLEY of Chicago, president of the National Public Health Nursing Association and a director of the National Tuberculosis Association, addressed the Indianapolis Public Health Nursing Association at a luncheon on March 9 and on the same day spoke before the nursing staff of the Robert W. Long Hospital.

ON March 1, Drs. F. M. Hines, D. M. Hines, A. V. Hines and L. N. Geysinger became associated in the practice of medicine and surgery at Auburn. All of these physicians have been

practicing in Auburn for several years, the practices at this time being merged into group practice which seems to be gaining in popularity over the country.

THE 22d annual meeting of the American Proctologic Society is to be held in Boston, Massachusetts, June 3, 4 and 6, under the direction of Dr. Alois B. Graham, Indianapolis, president, and Ralph W. Jackson, M.D., Fall River, Massachusetts, secretary. The preliminary program just issued promises a very interesting session.

THE appropriation for the library of the Surgeon General's Office of the Army has been increased to $15,000 in order that the work may be carried on with a reasonable degree of efficiency and desirable books purchased. This is the only library in the United States that acquires practically all the current medical literature of the world.

THE new hospital ship *Relief*, equipped with every modern device for safety, comfort and care of the sick and wounded, is now complete and ready to join the Atlantic fleet. This is the first ship to be built from the keel up for military hospital purposes, and however far from home port, it assures the same facilities for diagnosis and treatment accorded in the municipal hospitals of large American cities.

THE United States Civil Service Commission announces competitive examination on July 1 for medical interneship in St. Elizabeth's Hospital, Washington, D. C., at $1200 a year and maintenance. Other vacancies requiring similar qualifications also will be filled from this examination. Applicants should apply for Form 1312, stating the type of examination desired, to the Civil Service Commission, Washington, D. C.

S. M. PARKER has been added to the staff of the Indiana Tuberculosis Association as educational director, assuming his duties on March 1. His work will be among small societies which have no public health nurses and he will be available for all communities for lectures on health work, in organizing new associations, strengthening weak ones, and assisting in formulating programs for tuberculosis campaigns in the various counties.

DURING March the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Abbott Laboratories: Tablets Acriflavine-Abbott 0.46 Grain. Armour & Co.: Ampoules Pituitary Liquid-Armour 0.5 Cc. Hynson, Westcott & Dunning: Sterile Ampoules of Benzyl Benzoate-H. W. D. E. R. Squibb & Sons: Arsphenamine-Squibb, Neoarsphenamine-Squibb, Sodium Arsphenamine-Squibb.

THE *Medical Review of Reviews* announces that its June issue will be a special radium number dedicated to Mme. Curie, the discoverer of radium, who is to visit the United States this spring. The issue will contain special articles on radium written by the most prominent radiologists in the United States and Canada. Copies will be sent complimentary to every physician interested in the uses of radium and requests should be sent to the *Medical Review of Reviews*, 512 59th street, New York, N. Y.

A NOTICE from E. R. Stitt, Surgeon General of the United States Navy, states that there is at present a large number of vacancies in the medical corps of the Navy, and examinations are being held at frequent intervals in several of the coast cities in the United States both on the east coast and the west coast and at Chicago, Illinois. Circulars of information for persons desiring to enter the medical corps of the Navy may be obtained by addressing the Surgeon General U. S. Navy, Navy Department, Washington, D. C.

IN London, England, any person found to be harboring a rat or a mouse in his house is liable to a penalty of 5 pounds under a law recently enacted in Parliament. If the offense is continued he may be fined 20 pounds. Health measures demand the extermination of rats as they maintain an efficient transportation system for "black death" and other plagues and constitute a real hazard against lives and property. A recent bulletin from Washington makes the statement that it takes 200,000 men working full time to support the rat population in the United States.

TWENTY-FOUR graduates of the Indiana University School of Medicine have been appointed internes for the Indianapolis City Hospital for the ensuing year. They are Nicholas Joseph Eastman, Philip Bowser, Bert F. Ellis, Robert S. Millis, Joseph E. Killman, Stanley M. Casey, Ira Cole, Euclid T. Gaddy, Harvey L. Murdock, Orville Hamilton, Fred E. Gifford, Harry W. Garton, Edwin O. Alvis and C. V. Carter. Alternates are Donald Dryer, Verne L. Turley, John Oliver Eiler, Abe Cline, L. Forrest Swank, D. H. Eurit, Joseph D. Seybert, Orville M. Graves, Carl C. Reifeis, Wilbur F. Smith and S. L. Epple.

DR. WILLIAM C. BRAISTED, president of the American Medical Association, has been chosen as chairman of the committee to make arrangements for the establishment in Panama of an institution for the study of tropical medicine as a memorial to the late Major General William C. Gorgas and has just sailed for Panama to assume the responsibilities of this office. The purpose of the institution will be to promote biological research in fauna, flora, geology, soils and climate, with due reference to medicine, agriculture, forestry and fisheries and, in general, of scientific subjects that will promote the development of the American tropics.

LIEUTENANT-COLONEL HENRY SMITH of the Indian Medical Service is expected to arrive in the United States the latter part of this month to address several city, state and national medical societies at their conventions. Colonel Smith is best known as a cataract surgeon, but he is first a general surgeon and executive medical officer, having devoted over 30 years as such in the densely populated districts of Jullundur and Amritsar Punjab, India. He has been invited to address society meetings at Toronto, Chicago, Columbus, New York, Boston, Swamscot, St. Louis, Dallas, Denver, Tacoma, Seattle, San Francisco and elsewhere during months of May, June and July.

THE International Congress of Ophthalmology to be held under the auspices of the American Ophthalmological Society, the American Academy of Ophthalmology and Oto-Laryngology and fellows of the Section on Ophthalmology of the American Medical Association is a congress independent of and in no way affiliated with the International Congress of Ophhtalmology which has convened from time to time in the past, the last session of which was to have taken place in St. Petersburg in 1914. The date for the present International Congress to be held at Washington, D. C., has been changed from April 18 to 21, 1922, as previously announced, to April 25 to 28, 1922.

THE Eleventh Councilor District Medical Association, composed of the counties of Carroll, Cass, Miami, Wabash, Grant and Huntington, will hold their annual meeting at Logansport, Thursday, May the 19th, 1921.

There will be an election of officers, paying of annual dues, clinics held, and papers read and discussed.

Dr. Lorin Smith of Wabash will read a paper on "New Ideas on the Treatment of Diphtheria."

Dr. W. A. Fankboner of Marion on "The Essential Elements of Nutrition."

Dr. W. F. Smith of Huntington on "Cesarean Section Versus High Forceps Delivery."

Dr. J. L. Gilbert of Logansport on "Immunology."

The business and scientific program will be followed by a banquet and other entertainment.

MAY 12 has been designated as the first National Hospital Day, and the eight thousand hospitals of the United States and Canada have been asked to cooperate. The movement has been started by Mathew O. Foley, Managing Editor of "Hospital Management", and the general direction for the observance of the day has been placed in the hands of the National Hospital Day Committee with headquarters at 537 South Dearborn street, Chicago. The stated purpose of this special day is "that the community may know its hospitals", and the following suggestions for the observance of the day have been given: General invitation to the public to inspect the institution. Distribution of literature telling of work and needs of the hospital. Graduation exercises of schools for nursing. Open house for high school girls and others interested in nursing. Inspection of Nurses' Home.

THE 48th semi-annual meeting of the Northern Tri-State Medical Association was held Tuesday, April 12, in the Academy of Medicine Building, Toledo, Ohio. The program included the following scientific subjects:

Symposium—"Lethargic Encephalitis," by C. D. Camp, M.D., Ann Arbor, L. A. Levison, M.D., Toledo, and L. A. Miller, Toledo; "Valuable Methods Used to Extend Operability in Advanced Cancer of the Cervix," by G. V. Brown, M.D., Detroit; "Intestinal Obstruction," by C. E. Boys, M.D., Kalamazoo; "Physio-Therapy and Its Application to Modern Medicine," by W. W. Carey, M.D., Fort Wayne; "Syphilis—Recent Advances in Our Understanding of the Disease," by R. V. Hoffman, M.D., Director Scientific Research, U. S. Interdepartmental Social Hygiene Board, Washington, D. C.; "Tuberculosis and Pregnancy—A Study of Three Hundred Cases with Review of the Literature," by Stephen A. Douglass, M.D., Mansfield; "Pernicious Anemia and Its Treatment by Homohemotherapy," by B. M. Edlavitch, M.D., Fort Wayne; "The Diagnosis and Management of Small Renal or Ureteral Calculi," by Hugh Cabot, M.D., Ann Arbor.

BILLS affecting medical profession introduced in the Indiana Legislature:

HOUSE

H. B. 20 (KAMMAN)—Providing for registration of nurses, lowering standard and placing control of board in hands of physicians. Indefinitely postponed.

H. B. 69 (WILLIS, H.)—All time health officer bill. Sent to engrossment but not handed down by speaker for vote on last call.

H. B. 140 (HARRISON)—Registration of nurses bill drawn by nurses but amended as compromise with Kamman bill. Passed both houses and signed by governor.

H. B. 147 (GAESSER)—Permitting dealers in general merchandise to dispense drugs where community is without registered pharmacist. Indefinitely postponed.

H. B. 234 (Ross)—Defining chiropractic, legalizing practice and exempting it from provisions of all present health laws. Enacting clause stricken out on second reading.

H. B. 267 (KINGSBURY)—Medical association measure providing for annual registration of every licensed physician and strengthening present law in other particulars. Passed second reading and engrossed but not handed down by speaker because of jam of other bills near close of session.

H. B. 301 (SHULTZ)—Anti-vivisection bill. Indefinitely postponed.

H. B. 311 (JAMES)—Freak bill requiring every physician to give $5,000 bond and to notify relatives before operating on patient. Indefinitely postponed.

H. B. 346 (Ross)—Providing for city sanitation officers who shall not be physicians. Indefinitely postponed.

H. B. 445 (CURRY)—Denying hospitals right of judging fitness of physician to use hospital facilities and compelling them to admit any licensed physician whom patient might select whether competency approved by hospital or not. This bill would have demoralized the service and destroyed discipline in every hospital in the state and would have closed quite a few of them. It was indefinitely postponed in the Senate.

SENATE

S. B. 83 (MAIER)—Regulating the sale of certain poisons. Never reported out of committee on public health.

S. B. 120 (MAIER)—Authorizing state board of health to test consumption cures. Passed Senate but killed in House.

S. B. 148 (MEEKER)—Providing for separate board of chiropractic examiners, defining its powers and duties. Never reported out of committee on public health.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	83
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MUNCIE ACADEMY OF MEDICINE

January 28, 1921

PAPER:—*"Operative Treatment of Goitre"*:—DR. C. MELVIN MIX.

Abstract: In order to facilitate the study of cases of goitre suitable for operation, the correlation must be established between the clinical symptoms, results of metabolic studies, and the pathology present.

Much experimental and noteworthy work has been done in the last few years concerning goitre. Kendall and his associates have isolated and carefully studied the iodine-containing harmone thyroxin. Plummer's work on the basic metabolic rate has been of much value to the surgeon in helping to classify fit and unfit subjects for goitre operations.

Not all goitres cause enlargements of the thyroid gland and not all enlargements of this gland are goitres, as the enlargement may be due to carcinoma (not rare), rarely tuberculosis and syphilis.

Pathologically goitres are usually classified as colloid or parenchymatous; a convenient clinical classification is, (1) simple hyperplastic, (2) toxic, (3) cystic and (4) exophthalmic or Graves' disease.

The simple hyperplastic variety is more common to second and third decade and comprises the "swelled" neck of young girls. This type is the precursor of most goitres. They are probably due to some focus of infection and with the removal of the infection the goitre usually disappears, especially if augmented by judicious treatment with iodine internally or externally. If much care and caution are not observed, this simple, inoffensive type of goitre may be excited into troublesome activity by ill-advised iodine treatment. Immediate surgery directed toward thyroid gland is not indicated in this simple hyperplastic type.

The toxic type includes the fœtal adenoma. The enlargement is not uniform; toxic symptoms are present, such as tachycardia, nervousness, tremor and early exhaustion; patients perspire easily and present vasomotor disturbances of the skin. This type is operated successfully and safely by complete thyroidectomy and usually stay well.

The cystic goitres are more prevalent in middle life and present no toxic symptoms. The enlargement is not uniform, but nodular. Also in this group are substernal or plunging goitres. If pressure symptoms are present radical operation is demanded. Colloid and cystic goitres are surgical.

The exophthalmic type of goitre requires especially good surgical judgment. In a mild case a primary thyroidectomy may be performed. If the symptoms are moderate, no cardiac degeneration and no extreme emaciation present, the patient is put to bed in the hospital for a week or ten days and when the pulse and temperature become approximately normal and patient is sleeping and eating well, he is a fit subject for thyroidectomy. In the very extreme cases it is not advisable to operate, even though they

have been at absolute rest for some time. X-ray or radium should be used. If they improve sufficiently, a polar ligation of superior thyroid artery should be done under local and nitrous oxide-gas oxygen anesthesia. One pole should be done at a sitting. After ten days, another ligation may be done. Three months to a year later, a thyroidectomy should follow. It is oftentimes true, however, that the patient imagines himself well and will not return at the specified time, but will present himself later, when his symptoms have recurred and he is no longer a fit subject for operation.

The dangers of thyroidectomy are those which are inherent in the condition of the patient which we have discussed above; in addition, there is shock and hemorrhage from the operation itself, injury to the parathyroids and the recurrent laryngeal nerves, and secondary hemorrhage. Injury to the parathyroids and the recurrent nerves can be guarded against by leaving the posterior portion of the gland in its bed, a procedure advised and carried out by Kocher many years ago. Care and good technique would obviate the other dangers. A recent safeguard practiced by Dr. Crile is to abandon the operation in case patient's condition becomes critical on the table, and finish after a few days of rest when the patient's condition has improved. By observing all these various precautions the operative mortality rate of exophthalmic goitre has been reduced to the normal operative mortality rate of two and one-half percent, and in the hands of a few operators it has been reduced to a fraction of one percent.

In surgery we have the surest method of permanent cure of goitre. A carefully worked out plan of treatment, based on careful study of the general condition, clinical symptoms, and basic metabolic rate of the patient is necessary for success in the field of surgery. In no other group of cases is surgical engineering more necessary. Confidence of the patient in the surgeon and his associates is highly essential. In no other class of surgical cases are the results of careful, painstaking work more amply rewarded.

R. H. BEESON, Secretary.

DELAWARE-BLACKFORD

IN MEMORIAM

DR. OWEN WALTER OWENS—February 5, 1921

A comrade and co-worker in our ranks has fallen in the fullness of his life and labors. His was a busy life, devoted to service and sacrifice. It has been given to few men to crowd into the years of professional service such a large volume of work. Though but twenty years a resident of Muncie, he had attained an obstetrical record, in number of cases, equaled by few general physicians in the state. This may be taken as a fair index of the number of homes he served in the capacity of family physician. He was a tireless worker. The call to duty never found him lagging. Through all kinds of weather, night or day, he spared not himself in his ever ready response to the appeal of suffering. His last conscious moments were at the bedside of a patient.

Whether we may all agree as to the wisdom, duty or prudence of a physician making the supreme sacrifice by laying his all upon the alter of humanity, is a matter for the individual conscience, judgment and discretion, but we all must admire such devotion to a cause to which he has consecrated his life.

Therefore, be it

RESOLVED, by the Delaware-Blackford County Medical Society, that in the death of Dr. O. W. Owens, the Society has suffered the loss of a worthy member who exemplified in his life and character the best traditions of the profession. In manner he was ever modest, and in contact with others he was always kindly and courteous. He was in truth a gentleman.

And be it further

RESOLVED, That to the members of his household, to the stricken hearts of that broken family circle—the widowed wife and sons—our hearts are deeply touched and our sympathies go out to them in their great sorrow and bereavement. We commend them to the "solemn pride that must be theirs" in the fact that he gave his life in the service of humanity—the noblest cause to which any life can be dedicated.

RESOLVED, That this expression be delivered to his family and be made a permanent record in the transactions of this society.

W. W. WADSWORTH,
A. A. CECIL,
S. G. JUMP,
Committee.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

ACRIFLAVINE-HEYL.—A brand of acriflavine (see New and Nonofficial Remedies, 1921, p. 22). Heyl Laboratories, New York.

PROFLAVINE-HEYL.—A brand of proflavine (see New and Nonofficial Remedies, 1921, p. 23). Heyl Laboratories, New York.

CALCIUM CACODYLATE-IPCO.—A brand of calcium cacodylate (see New and Nonofficial Remedies, 1921, p. 50). Intra Products Co., Denver, Colo.

DUBOIS IODOLEINE, INJECTABLE, AMPOULES, 2 Cc.—Each ampoule contains 2 Cc. of DuBois iodoleine (see New and Nonofficial Remedies, 1921; p. 153). David B. Levy, New York.

TINCTURE OF DIGITALIS FAT-FREE-SQUIBB.—A biologically standardized fat-free tincture of digitalis corresponding in drug strength to the U. S. P. tincture of digitalis. E. R. Squibb & Sons, New York (*Jour. A. M. A.*, March 5, 1921, p. 655).

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AMPOULES PITUITARY LIQUID-ARMOUR 0.5 Cc.—Each amopule contains 0.5 Cc. pituitary Liquid-Armour (see New and Nonofficial Remedies, 1921, p. 222). Armour & Co., Chicago, Ill.

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MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: White's Wonder Worker (W. W. W. Medicine Co.), falsely represented as an effective remedy for malaria, rheumatism, syphilis, all kidney and liver complaints, female disease and a number of other things. Kar-Ru and Gon-Nol (Kar-Ru Chemical Co.), the first falsely represented as an effective remedy for rheumatism, kidney, liver, bladder and stomach troubles, mental and physical debility, blood diseases and irregular menstruating; the

(Continued on advertising page XVIII)

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(Continued from Page 138)

second fraudently represented as an effective remedy for gonorrhea. O-Zo-Nol (Ozonol Chemical Co.), falsely represented as an effective cure for eczema and all eruptions and diseases of the skin, nasal catarrh, sore throat, erysipelas, croup, piles and earache. G. S. Remedy, falsely represented as an effective remedy for pellagra, rheumatism, indigestion, malaria, stomach, liver, kidney and bladder diseases and syphilis. - Gon-Nor (Occidental Medicine Co.), falsely represented as an effective astringent in acute and chronic gonorrhea, urethritis, etc. Methyloids (Frederick Stearns & Co.), falsely represented as a successful treatment for gonorrhea and its complications. B-I-F Combination and B-I-F Capsules (Hollander-Koshland Co.), both represented as an effective remedy for gonorrhea, gleet and disorders of a similar nature and origin. Brsco (Brsco Medicine Co.), falsely represented as a treatment for tuberculosis, bronchitis, Spanish influenza, hay fever, asthma and ordinary coughs and colds. Sulpho-Saline Still Natural Mineral Water (Excelsior Springs Mineral Water & Bottling Co.), falsely represented as an effective cure for stomach troubles, headaches, jaundice and vertigo. (*Jour. A. M. A.*, March 5, 1921, p. 671).

MORE MISBRANDED VENEREAL NOSTRUMS.—The following preparations, sold for the treatment of venereal diseases, have been the subject of prosecution by the federal authorities, chiefly because the therapeutice claims were held to be false and fraudulent; Orion Pearls S. and C. Compound (American Druggists' Syndicate), capsules containing essentially a mixture of oils and resins, including cinnamon, santal, copaiba and probably buchu and sulphurated fixed oil. Antiseptic Powder (Henry S. Wampole & Co.), consisting essentially of boric acid and alum with traces of volatile substances including methyl salicylate and indications of menthol. Depurativo D. C. (R. A. Delgado Carbonell), consisting essentially of potassium iodid, unidentified plant extractives, alcohol and water. Gonocol (National Drug Co.), essentially a watery solution of zinc sulphate, hamamelis water and a small amount of alcohol, with 0.38 grain iodin and 0.36 grain protein to each fluid ounce.

Bouchard Pills (Martin Rudy), consisting essentially of iron sulphate and resins, with a small amount of oil of cubebs. Some injection tablets in the same package consisted essentially of zinc sulphate and potassium permanganate. Perlas Urinales-Antisepticas (G. J. Fajardo), containing methylene blue, cubebs and nutmeg, Metilol (Logan Pharmacal Co.), tablets consisting essentially of hexamethylenamin, nutmeg and cubebs. Montauk Santal Comp. (G. J. Fajardo), capsules containing oils, including sandalwood oil. (*Jour. A. M. A.*, March 12, 1921, p. 743).

WOODS' TOBACCO HABIT CURE.—On February 24, 1921, the Postmaster General issued a fraud order against Edward J. Woods, Inc., exploiters of drink and tobacco habit cures. Woods' cure for the tobacco habit was analyzed in the A. M. A. Chemical Laboratory some years ago and it was found that among the tablets that constituted the treatment there were some of asafetida and methylene blue. The purchaser was told that one of the signs of a cure was that of offensive-smelling perspiration and a strong odor from bowel excrement, while the "greenish color" of the urine was "proof positive" that the tobacco poisons were being eliminated through the kidneys. The government's case dealt only with this alleged cure for the tobacco habit, but, as the fraud order has been issued against Edward J. Woods, Inc., it will have the effect of putting the Woods' "drink cure" out of business also. It was also brought out that the directions now being sent out with the treatment now contain no admonition to watch for favorable signs, but the ingredients which manufacture those signs were still retained in the treatment. (*Jour. A. M. A.*, March 19, 1921, p. 811).

MODIFIED SALICYLIC ACID AND SAMARIN.—In general the pharmaceuticals of Frank S. Betz Co., Hammond, Ind., are non-secret in composition. However, Modified Salicylic Acid and Samarin are described in the Betz catalogue without information concerning their composition. In view of this and because the claims made for them seemed questionable, the A. M. A. Chemical Laboratory analyzed these preparations. Both of these preparations are marketed in the form of tablets. Each tablet of Modified Salicylic Acid was found to contain approximately 4.8 grains acetylsalicylic acid and about 0.5 grain each of gypsum and starch, with a trace of talc. Each Samarin tablet was found to contain about 2 grains acetanilid and nearly 1.5 grain salicylic acid, probably in the form of calcium salicylate. The tablets were uncoated and colored green throughout, and the acetanilid was not declared on the label as is required by law. (*Jour. A. M. A.*, March 26, 1921, p. 883).

MANGANESE.—Investigation of Reiman and Minot demonstrate that ores containing manganese as oxids and silicates are soluble in gastric juice; that manganese is absorbed in the blood stream and again eliminated quickly: and that even prolonged feeding of large amount of manganese ore to dogs failed to produce significant changes in the manganese content of the blood and tissues or to cause any pathologic symptoms. (*Jour. A. M. A.*, March 26, 1921, p. 867).

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Next Annual Session, Indianapolis, September 28, 29, 30, 1921. List of Officers and Committees on Adv. Page 2.
Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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VOLUME XIV MAY 15, 1921 NUMBER 5

ORIGINAL ARTICLES

PELVIC LYMPHANGITIS*

CARL HABICH, M.D.
INDIANAPOLIS, INDIANA

In recent years the investigation of the role played by the lymphatics in the extension of those infections which heretofore have been attributed to "extension by continuity" has reached such an important place that we can no longer ignore the fact that this part of the circulatory system has been neglected. In a recent issue of the *Journal of the American Medical Association* the following appeared in an editorial under the heading, "The Role of Lymphatics in Pneumonic Infections of the Lungs":

". . . the submucosa of the trachea and bronchi has been demonstrated by the New Haven investigators to furnish a pathway of infection to the lung. It contains a rich plexus of lymphatics prominent everywhere and devoid of valves. There is a continuity throughout this lymphatic system so that the bacteria which once find their way into it can easily spread. Although it thus affords a direct pathway of infection to the lung, Winternitz and his colleagues allege that it may also serve as a protective mechanism against pulmonary infection, for the drainage of the submucosa of the trachea and bronchi is largely diverted as the lung is approached to the protective regional lymph nodes.

"The spread of infection through lymphatic channels is probably more common than has been appreciated by most clinicians. The investigations of recent years have shown that progressive pyelonephritis is by no means always, if indeed it is commonly, dependent on direct transference of the micro-organism backward along the urinary channels from the distal parts of the latter first invaded. The little recognized lymphatics of the urinary organs may serve in this case as the paths of bacterial advance independent of the urine in the ureters."

Deaver believes that chronic pancreatitis is the result of a progressive lymphangitis and not the result of infection which has ascended by continuity through the pancreatic duct from the duodenum or gall bladder. In viewing the results of infection in the female pelvis and in clinging to the accepted ideas of the extension of these infections, we are confronted with a series of phenomena which have thus far remained unexplained.

Chronic endocervicitis presents the most frequently encountered objective pathology of the whole gynecological system, and appearing as it does at the gateway of the pelvis remains to threaten the comfort and even the life of the unfortunate patient. It is a definite clinical entity and has its incidence from early childhood or even infancy until well into the post-climacteric period. Sturmdorf has very aptly referred to the cervix as the tonsil of the uterus, as it serves when infected as a permanent focus of serious potentialities. Indeed, the mere mention of chronic endocervicitis should call to our minds the picture of all pelvic pathology of infectious nature, which has been of slow development and of obscure origin.

Above and below the internal os of the uterus we have a very striking physiological, anatomical and pathological contrast. Functionally, the cervical canal acts merely as a passive passageway between the vaginal vault and the uterine cavity, and it plays no part in the menstrual cycle. The cervical mucosa, containing as it does the racemose glands of Naboth, a columnar lining, and subject as it is to frequent lacerations, is highly susceptible to infection. On the other hand, excluding those acute cases which follow labor, abortion or instrumentation, and although subject to the hyperemic changes of menstruation, we find that chronic infection of the corporeal endometrium is exceedingly rare. We are taught that, in spite of the fact that the infecting organisms travel over the surface of the lining membrane of the body of the uterus in order to reach the fallopian tubes and their surrounding structures, the endometrium itself is seldom involved.

Granting that the gonococcus is the most frequently offending organism in the female pelvis we find that Graves of Harvard, in his text

*Presented before the Surgical Section of the Indiana State Medical Association at the South Bend session, September, 1920.

book says, "The endometrium seems to be peculiarly immune to what may be called a permanent infection of gonorrhea." Also, Arthur H. Curtis, after the careful and scientific investigation of one hundred and eighteen cases, records the following conclusion: "Chronic endometritis, *per se*, with bacteria present in smears and cultures, is practically to be ruled out as a definite clinical entity." Howard Kelly of Johns Hopkins says, "Out of eighteen hundred cases occurring in my own service and analyzed by Dr. T. S. Cullen, endometritis showing definite inflammatory changes, exclusive of tuberculosis, was found only forty-nine times. The mucosa of the uterus was studied in every case when that organ had been removed or when scrapings had been taken, including many cases of myomata and of pus tubes. We found that even where there was a pyosalpinx on one or both sides, that the uterine mucosa was often perfectly normal." Quoting further, "It is safe to say that ninety-nine out of one hundred cases where the physician curettes the uterus for endometritis, and removes more or less endometrium, no real endometritis in the sense of a chronic inflammatory affection is present."

In a paper read before the Section on Obstetrics, Gynecology and Abdominal Surgery at the seventy-first annual session of the American Medical Association, at New Orleans in April, 1920, William J. Mayo made the following statement: "The endometrium is relatively seldom diseased, and a high percentage of menstrual disturbances are ovarian and tubal in origin."

The later literature abounds in the reports of many different scientific investigations by many different workers, which show that the actual existence of chronic, infected, inflammatory endometritis is at least exceedingly rare, and that those conditions which are so extensively described in practically all of our text books as different varieties of inflammatory endometria are merely the normal, histiological changes incident to the periodical menstrual metamorphosis, which simulate an inflammatory process in its different stages, and that when bacteria are found above the internal os we may look for a leaking tube. Norris says, "Prior to the researches of Adler and Hirschmann, which were subsequently confirmed by the work of Keene and the author, as well as by other observers, many of the physiological changes incident to the normal menstrual cycle were viewed as pathogenic, and, as a result endometritis was frequently diagnosed when no inflammatory change of any sort existed. Furthermore, the classification of endometritis was greatly complicated by such qualifying terms as glandular, interstitial, polypoid, fungoid, etc., which were in many instances at least, merely phases of the menstrual cycle. Thus if the endometrium to be examined has been removed a few days prior to menstruation, the glands would naturally be large and prominent, and a glandular endometritis would be diagnosed, whereas, if the tissue chances to be examined in the post menstrual period, it was often thought to be the seat of an interstitial inflammation."

Barbour and Watson say that the frequently described and rarely encountered so-called hyperplastic glandular endometritis is "more of the nature of a new growth. It is really a simple adenoma" or rather an adenomatous overgrowth analagous to that found in the thyroid gland in Graves' disease, and is never inflammatory in character.

The end result of an infected cervix is frequently infection of the adnexal tissues, and we will consider those cases of pyosalpinx, sactosalpinx, hydrosalpinx, etc., in which there have been no history of labor, abortion or instrumentation. This type of case is common, and usually the result of gonorrheal infection of the cervix, the gonococcus, according to Menge, being found in the cervix in ninety-five percent of the chronic gonorrhea cases in the female. So our observation of the pathology of the pelvis reveals that very frequently we have the following condition, of below, a chronically infected cervix, above, chronically infected adnexa, but between these two a bacteria free endometrium.

Now if this is true, and if it is also true that the invading organism travels by continuity over the surface of the endometrium, it is difficult to understand why this lining membrane of the body of the uterus so successfully resists infection, especially with the knowledge that ordinarily columnar epithelium is peculiarly susceptible to invasion by the gonococcus, and that the open mouths of the utricular glands would seem to invite infection. It is in an attempt to correlate these facts and to find a satisfactory explanation for this apparent immunity of the endometrium that some of the literature has been searched.

The opinions encountered and the conclusions observed seem to be limited only by the amount of literature investigated. We can readily understand the comparative immunity of the vaginal mucosa, with its stratified squamous epithelium, its absence of glands and its freedom of hair follicles, offering, as it does, a mechanical rather than a biological defense, and we have no difficulty in realizing the unusual vulnerability of the cervix, with its columnar epithelium, its racemose glands and its lacerations, but we find many and variable explanations concerning the immunity of the corporeal endometrium.

Graves takes cognizance of this immunity by the following statement: "The endometrium seems to be peculiarly immune to what may be called a permanent infection of gonorrhea. It

must be that during the process of ascending from the endocervix to the tubes, the gonococcus resides actively on the mucous membrane of the endometrium for a time, but that a true gonorrheal endometritis is rarely seen. The conclusion is that the endometrium serves as an efficient bridge for the passage of the gonococcus to the tubes, but that it is not a congenital soil for the organism to make a permanent abiding place. This fact is shown in the microscopic examination of uteri removed for adnexal disease in which the endometrium presents no signs of active inflammations."

In other words, the statement is made that the endometrium is not a fertile soil for the invading organism, but no attempt is made to explain why this is true. Howard Kelly, in acknowledging this fact, offers an explanation which is accepted by many. He says, "This exemption seems undoubtedly due to the fact that the uterus is so easily drained that the infectious material is not retained long enough to provoke and maintain an active inflammation. In examining many specimens of endometritis it is rare to find signs of true inflammation, or even evidence of any organism deep down in the glands or the sub-mucous tissue."

If we grant that the draining propensities of the uterus is the correct explanation of this phenomenon we must not forget that the cervical mucosa, although frequently infected even in the absence of lacerations, possesses equally good drainage. Also, it would seem that, as the gonococcus has no motion of its own, and we are to believe that it is retained long enough to travel from the internal os to the entrance to the tubes, surely it would be in contact with the mucosa of the endometrium long enough to provoke some inflammatory change.

The idea is advanced that this immunity is due to the periodical monthly shedding of the decidua, but if this is true in the period of time which elapses between the menstrual cycles the bacteria would have ample time to invade the tissues.

It would be possible to continue almost indefinitely to enumerate the different ideas and theories found in the literature which attempt to explain why the endometrium is so seldom infected, but I desire to present to you some thoughts, the result of the work of Dr. Arnold Sturmdorff of New York, which may at least help to solve this apparent phenomenon and some of its sequelæ.

The fact that true infected, inflammatory endometritis is rare pathology leaves unexplained many of the cases of amenorrhea, menorrhagia, metrorrhagia and dysmenorrhea which we have heretofore attributed to endometritis, and it is now rather generally conceded that these symptoms are functional, the result of endocrine distortion. When we believe that chronic, slowly developing pathology of the pelvis, without history of labor, abortion or instrumentation, such as chronic broad ligament abscess, pyosalpinx, hydrosalpinx, tubo-ovarian abscess, etc., have insidiously developed from infected cervices by continuity over the surface of the endometrium, we are reaching a conclusion for which we have no definite, tangible proof.

In recalling some of the anatomy and physiology of the uterus and its appendages we find that the musculature is subject to rather regular rythmic contractions, exclusive of the normal contractions of labor and of menstruation. All musculature, whether it contains voluntary, involuntary or a mixed variety of fibres, must necessarily do a certain amount of work to prevent its degeneration. The uterus has the added function of preserving drainage and of controlling its blood supply, as the uterine veins are valveless and this organ normally requires a wide range of circulatory change. Also, the uterus contains a very extensive lymphatic distribution. According to Leopold, this circulation has its origin in the cervical mucosa and the endometrium. Here after arising from the lacunæ of the mucosa it travels through minute ostia into the muscular substance of the uterus, and branching into a capillary network penetrates the delicate sheath of connective tissue which surrounds each fasciculus of muscular fibre. So every fascicle and every muscular bundle of the uterus is surrounded by this very extensive system of lymphatics, which travel up to the subperitoneal surface into the collecting channels, and these course parallel to the uterine and ovarian vessels. There is no definite line of demarkation between the lymphatics of the cervix and those of the body of the uterus, the small capillaries of each anastamosing with those of the other.

This is the course which infections of the cervix take in their extension, following the lymphatic system, as infections in other parts of the human anatomy are prone to do. It is an ascending lymphangitis which results and not an extension by continuity by way of the endometrium. The endometrium is not particularly immune to infection, in itself, but being a highly specialized tissue, is merely, according to the natural law, well protected. The time limit of this paper precludes the possibility of entering into a discussion of the pathological hyperplastic changes which have been found in the lymphatics involved.

According to Sturmdorf, we find this ascending lymphangitis "occasionally establishing miliary myometrical abscesses of the uterine musculature, or continuing to the peri-adnexal lymphatics, causing a kinking of the tubes, or perhaps an agglutination of their ostia, even at times attacking the tunica albugunea of the ovaries, thickening their capsular tunic and interfering with their normal function." This is the method by which this slowly developing pathology arises from the endocervical infections and this is the process which furnishes the etiology of those cases of amenorrhea, menorrhagia, metrorrhagia and dysmenorrhea, which have in the past been attributed to chronic endometritis. It is not difficult to understand that, the normal uterine contractions being interrupted, there would be a resulting stasis by reason of the interference of the normal circulatory control, and as a consequence, a prolongation of the menstrual cycle, or perhaps an excessive flow. And equally true, working on the theory of an ovarian harmone control of the periodical monthly bleeding of the endometrium, and also a like control of the incoagulability of the menstrual blood, the thickened tunica albugunea "may impede the maturation and rupture of a graafian follicle with consequent inhibition of menstruation (amenorrhea), or retarding its subsequent contraction and involution protract the menstrual flow (metrorrhagia). The dysmenorrhea resulting from endocervicitis may be explained by the fact that "the myometrical sensory nerve filaments penetrate the muscle sheaths and hence the normal uterine contractions, intensified during the menstrual cycle, compress the infiltrated perimyseal areas and become painful. It is a marked characteristic of the dysmenorrhea resulting from endocervicitis that it subsides after the inauguration of a full flow."

The severity of this type of pelvic infections, which do not include those following labor, abortion or instrumentation, depends entirely upon the amount of cervical invasion, the virulence of the infection and the resisting qualities of the patient, and the functional changes in menstruation have a direct relationship to the amount of ovarian involvement. Recognizing chronic endocervicitis as a primary focus of infection and its extension as an ascending lymphangitis, places it, in accord with our modern conception of bacterial invasion, upon a rational parallel with any other infectious process.

If further investigation of this subject would prove, as it has in other parts of the body, that the extension of infection from the cervix is by way of the lymphatics, it would be a happy solution of some of the unexplained phenomena of pelvic infections and the associated menstrual disturbances.

DISCUSSION

DR. WALTER H. BAKER (South Bend): This is a very worthy and scientific paper. It deserves a great deal of thought, investigation and discussion, and is surely a step forward and in the right direction in the study of pelvic infections. If our thought and reasoning are not correct our treatment is apt to be wrong, and in the past our treatment as a whole has not been right. This thought should lead us to new treatment.

With the exception of the gonococcus it is generally accepted that infection enters the pelvis from the cervical mucosa by the blood stream or lymphatics. The gonococcus has the reputation of entering the pelvis by direct extension over the endometrium and mucous membrane of the tubes, although it is not conceded that it does not also go by the lymphatic and blood vessel route. The endometrium does not infect easily, as has been shown by this paper, and as we found in making cultures from the endometrium about a year ago when by the most painstaking methods we could not get a culture unless some irritation from pressure, tumor, etc., were present and acting upon the uterus.

This paper does not enter upon the subject of treatment, yet I want to venture far enough to bring up the uselessness of uterine curretage. It is and has been practiced for the cure of leukorrhea and chronic endometritis. This mode of treatment should be discontinued and the teaching widely disseminated through the profession. There is not much doubt in the minds of all authorities today but that curretage opens up new channels for infection and does not cure the leukorrhea.

It was impressed upon me, when studying this subject, that great care should be taken in preparing the specimen, if it be a uterus which has been removed by operation, and that the actual cautery should be used in opening the specimen to prevent contamination.

DR. E. E. PADGETT (Indianapolis): My good friend, Doctor Habich, and I have talked this matter over, and I am sure it is with some little hesitation that he prepared this paper and read it, because it is different from the way we have been in the habit of thinking. I think we have long since decided that endometritis is a condition and not a disease, and that the thing we used to call endometritis when there was no other sign of infection past or present, was not true endometritis. On the other hand, it is very hard to believe when a uterus is seriously infected, without operation or any postpartum infection, that there is not some infection of the endometrium. I think we have infection of the endometrium in those cases. I believe everybody who operates on the female pelvis takes out a lot more uteri than they used to,

but seldom curette them. The reason for thinking they do is that I believe infection in the pelvis does not affect the endometrium as much as the uterine muscles, and if you are going to get at it you must remove the uterus. An acute gonorrhea, going like fire in dry leaves, undoubtedly goes through the lymphatics, and I think we have some infection of the endometrium in those cases; but the endometrium throws it off without any permanent injury to the uterine endometrium. I believe a large pus tube may give some infection from the uterine cavity at the time. I agree with Doctor Habich that a patient who for years has had a cervicitis that the patient has known about, may later, without any very violent symptoms, and without knowing that she is very sick, show some pus tubes. I think undoubtedly the infection is from the lymphatics and not from the endometrium.

I quite agree with what Doctor Baker has said about curettage for leukorrhea. I have not curetted for a long time except to remove particles from an incomplete operation. Your leukorrhea comes from the cervix and you cannot cure by curettment of the uterine canal.

DR. JAMES A. WORK, JR. (Elkhart): I would like to report a case which I reported before the South Bend Society a year ago. This woman came to me on account of sterility. She had been married some eight or nine years and was anxious to have a child. I found from the history that her husband had had gonorrhea before marriage, and on examination found chronic infection of the cervix with tenderness on both sides of the pelvis. While I was away on a vacation she was curetted by another physician —I might have done the same thing myself at that time—to relieve her and to see if she could bear a child. Two weeks after that time I was called to see her and found a large mass at the left side of the pelvis involving the tubes and ovary, which subsided under medical treatment. I believe that case adds to the argument which has been presented here today, that we should treat the endometrium with due respect.

DR. ALFRED S. JAEGER (Indianapolis): Doctor Habich's paper is valuable for two reasons: first, because it shows that the younger men are thinking for themselves, they are refusing to accept without proof the opinions advanced by the older men; and, secondly, because it has a very practical application, especially as far as treatment goes. Doctor Habich does not mean at all to convey the idea that there is no such thing as acute inflammation of the corpus endometrium, but that one cannot in the nature of things have a chronic endometritis. The woman every month sheds her endometrium, therefore there can be no chronic condition, in the sense the term is here used, with a membrane formed every four weeks. That does not mean that one cannot have an acute recrudescence of this endometritis by extension. If I am not mistaken Doctor Habich used the expression "glandular" endometritis. There is no such thing, for the simple reason that, if my memory of the histology of the body of the uterus is correct, this endometrium does not have glands. It has folds or pseudo ducts which bend when they come in contact with the musculature, but there are no true glands above the internal os.

I recently in our local society reported a critical analysis of 214 cases of salpingitis. I took the stand that it was not right to say that a woman was infected with gonorrhea every time she had a salpingitis; that in a majority of cases the salpingitis is not primarily gonorrheal in character and not due to ascending inflammation. If you will analyze carefully your cases you will find that the salpingitis or its predisposing factor was present in many long before they possibly could have been infected with gonorrhea. You also will find that most of these women give a history of the acute exanthemas of childhood to which in a great percentage of cases the pelvic involvement may be traced. Also one frequently can trace a distinct relationship between inflammation of the tonsils and pelvic inflammation—I mean of the ovaries and tubes. If you go through your cases carefully you will be surprised at the frequency with which you find women who have had the mumps and shortly afterwards begin to have insidious symptoms in the pelvis which they have never had before, and which in time develop into the symptom complex of well defined pelvic disease.

DR. J. C. FLEMING (Elkhart): This paper does not deal with treatment, but I would like to mention two treatments that it seems to me are very important. First, in those cases of cervical endometritis, the so-called Schroder's operation, in which you go in and dissect out practically all that infected cervical tissue and turn up a flap of the vaginal mucous membrane, that is covered with squamous epithelium, to meet the mucosa of the uterine body. It seems to me that that gets rid of this chronic cervical infection, particularly if infection is combined with laceration. In those cases that are not combined with laceration the procedure that I use is that of Hunner of Baltimore, making linear scarifications down through the cervix every few millimeters, making this scarification through the cervical mucosa so as to destroy these infected glands. I think that is preferable to curettement in these cases.

There is another class of cases that have long passed the menopause and yet continue to have hemorrhage, cases in which you are led to suspect malignancy of the body of the uterus. You take out that uterus and you find it absolutely

free from fibroids, from malignancy, and the only thing you find is an endometrium which is covered with a slimy, mucoid exudate and granular tissue, what you would understand as a polypoid endometritis. You frequently see these in people of fifty or sixty.

DR. CARL HABICH, Indianapolis (closing): There was nothing said in my paper about treatment, although I have a few ideas about it. I believe, first, that the proper treatment has not been found. The nearer we approach amputation of the cervix the nearer we approach a cure. However, there are many objections to amputation of the cervix, and eventually I believe it will be abandoned in patients still in the child-bearing period because of the fact that eighty percent of women do not become pregnant, and of the twenty percent who do about seventy-five percent have distocia of the cervix. Curtis of Chicago has reported a series of cases of endocervicitis treated with radium. He says the objection is that it stops menstruation and causes sterility. The Sturmdorf operation is wrong because it covers up the infection. They reline the cervical canal with new mucosa, but the glands have not all been taken out, so we still have focal infection left. However, you do not see the signs in the vaginal discharge. In Sturmdorf's operation he takes out a cone-shaped piece of the cervix, down to the internal os, but he leaves the glands near the internal os, and you still have a focus of infection. My belief is that the nearer you approach amputation the nearer you approach cure.

In those cases mentioned of women past fifty who have had senile changes, their bleeding is due to endocrine disturbance, not to the local condition in the uterus.

POLYNEURITIC SYNDROME IN YOUNG CHILDREN*

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Few diseases of children present such an extremely wretched picture as the polyneuritic syndrome described by some authors under the term acrodynia. A case of this type recently came under my observation.

E. H., age 2 years, 2 months, was brought to The Clinic on March 11, 1920, with the complaints of failure to gain in weight, extreme irritability, sleeplessness, and skin eruption. She was the first child of healthy parents each 25 years of age. There was one other normal breast-fed child 3 months of age.

The patient weighed 3 pounds, 4 ounces at birth. Normal delivery. No cyanosis nor convulsions. Breast-fed exclusively for 10 months. First teeth at 8 months. Walked at 1 year and talked at 13 months. She had been perfectly well until August, 1919, when she had "influenza". Since that time she suffered from frequent attacks of coryza. Since 10 months of age the diet has consisted exclusively of about a quart of milk, cooked cereal, toast, eggs occasionally, and scraped apple. For about three weeks previous to the first examination in March, 1920, there had been marked anorexia, diarrhea and loss of weight. She was quite inactive but extremely fretful. Seldom does one witness such a picture of dire distress as displayed by this child. Only a few moments of restless sleep were obtained at one time. It was necessary for the mother or grandmother to hold her and gently rub her hands or feet to give her any rest whatever. The body was continually covered with the most profuse perspiration. In a few moments the garments and bed-clothes would become saturated with moisture, requiring frequent changes throughout the day and night.

There was evidence of marked loss of weight, from 19 pounds 8 ounces on March 11 to 15 pounds 9 ounces on March 20. Temperature 100 degrees. The skin hung in loose dry folds with very poor tissue turgor. There was a generalized itching and scratching. Unless restrained, the child would scratch any exposed surface until the skin bled. On the cheeks were patches resembling weeping eczema. The buttocks were covered with similar lesions. The hands and feet were cold, bluish red, swollen, tender and apparently painful to the touch. The fingers were held spread apart. The skin covering the fingers and toes was macerated in places and showed many small ruptured vesicles. Conjunctival redness with lacrimation and photophobia was present early in the course. The anterior and posterior cervical glands were somewhat enlarged. There was a profuse purulent nasal discharge. A severe stomatitis with necrosis of the gums and alveolar processes with profuse malodorous salivation resulted in loss of six teeth. Ears, chest, heart and abdomen essentially negative. Deep reflexes obtained with difficulty.

Laboratory findings:

Leucocytes 23,000, two weeks later 15,000.
Wassermann—negative.
Von Pirquet—negative
Urine —negative.
Stool —negative.

X-ray—head and chest revealed no abnormalities. With a careful dietary regime and symptomatic treatment improvement began in about two weeks. Complete recovery, except for the loss of teeth, followed.

*Presented before the St. Joseph County Medical Society Oct. 26, 1920.

William Weston[1] reports eight cases of this type. He reviews the literature and considers "acrodynia" to be a food deficiency disease, although "this hypothesis is difficult to reconcile with the history of the epidemics". In Paris in 1828-30 certain barracks were entirely free from the disease, while others, the rations being the same in kind and variety in all, the crowding and hygienic diseases the same, were filled with patients suffering from this disease.

Byfield[2] reports a series of seventeen patients seen in a period of five years who present a similar clinical picture. His patients with one exception, a child of four years, were under three years of age. He considers that the disease is increasing, and that infection plays a more important role as an etiological factor than dietary error. The case presented here seems to support this conclusion. Postmortem examination in one of his cases "showed involvement of an occasional anterior horn cell of the spinal cord, gliosis about the central canal, and edema of the sensory roots". He suggests that the disease is a "post-influenzal radiculitis or sensory polyneuritis". As the disease tends to improve spontaneously, symptomatic treatment with the intention of making the patient comfortable should be instituted. Atropine may be used to control the profuse perspiration, chloral and bromides to provide much needed rest, alkalies if acetone is present in the urine, and soothing lotions such as calamine to the skin.

Summary:

A case exemplifying a "polyneuritic syndrome" is presented. The predominant symptoms consist of listlessness combined with extreme restlessness, rapid loss of weight, profuse perspiration, necrosis of gums and alveolar processes with loss of teeth, swollen, tender, cold, bluish-red fingers and toes with maceration of the skin over them, and diminished reflexes. The picture is associated with slight fever, leucocytosis, and suggests the result of an infection.

1. Weston: Acrodynia. Archives of Pediatrics. Vol. 37; No. 9; Sept. 20; p. 513.
2. Byfield. American Journal Diseases of Children. Vol. 20; Nov. '20; No. 5; 347. A more complete bibliography is given by Byfield.

THE TREATMENT OF AGED PATIENTS WITH BENIGN PROSTATIC TUMOR*

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The layman has not learned to come for prostatic surgery sufficiently early. As a consequence, aged patients with prostatic tumors are often poor surgical risks when first seen.

*Presented before the Surgical Section of the Indiana State Medical Association at the South Bend Session, September, 1920.

The treatment of the prostate is divided into three parts. The first in importance is the preparatory treatment, where the problem is to make these patients good surgical risks. The second is the post operative treatment, and the third and least in importance is the operation itself.

The mortality attending pioneer prostatic surgery has been largely overcome. This mortality was largely influenced by faulty kidney action resulting from urinary back-pressure. Added to this was the lowered resistance resulting from the exhaustion attending many of the terminal phases of this affliction, the broken sleep due to frequent urination, the pain and great muscular effort occasioned by the obstruction to the urinary flow, the toxemia from accumulation within the blood of elements in excess of the kidneys' ability to excrete. This resulted in urinary cachexia, digestive disorders and disturbances in cardiac function. (Blum.)

The aged patient is not a good surgical risk when compared with younger and more vigorous individuals. They come to us at an age when their vital forces are impaired as the natural result of years, hence the importance of preparatory care, a care that was largely neglected or imperfectly appreciated in the early history of prostatic surgery and which does not seem to be required in other surgery in patients of this age.

Our first concern on seeing these patients is to learn the condition of the bladder and kidneys. Is the bladder full of residual urine and has this fullness influenced the eliminating power of the kidneys? The effect on kidney elimination is not always influenced by the quantity of residual urine carried, but in every case with residual urine the assumption must be that the kidneys may be badly impaired. For a number of years the practice has been that no prostatic bladder should be emptied suddenly the first time, the rule being that half the quantity removed must be immediately replaced, using some appropriate fluid. That patient may be in any one of a number of phases of prostatic kidney, so that in extreme cases of bladder distension covering longer periods of time, fractional catheterization is to be advised. By this is meant that a small amount is removed by catheter every hour or two. This permits the back-pressure on the kidneys to be relieved slowly, greatly lessening danger of congestion, anuria and death.

The patient with a large retention and an overflowing bladder has what he terms a too active bladder. He has a polyuria of low specific gravity. The kidneys have a lowered permeability to solids and must try to make up the difference from normal by increasing the volume. Consequently these patients are thirsty,

and have a dry tongue and throat. Many patients will deprive themselves of water, believing that the less they drink the less they will be bothered. This results often in a condition where the patient comes with marked distention and back-pressure, and very little water or fluid reserve in the body for use in kidney stimulation. Let this distended bladder be suddenly emptied when very little fluid reserve is present and anuria and uremia may result. Repeated partial emptying, at the same time plying the patient with water at least equal to the amount withdrawn, supplies the necessary stimulation to keep the kidneys active. The fact that the kidneys have maintained their function while the weight of backpressure was being reduced, does not mean that we have sufficient kidney function to meet the shock of surgery. The probability is that we have not. The relatively high mortality following the one step prostatectomy is believed to have been due to this insufficiency. The principal effort of preparatory treatment is toward repair of this function. Constant or frequent bladder drainage, coupled with copious water intake, offers the best hope of improving the kidney function.

How are we to know when the kidney function will permit surgery? Phthalein and urea elimination, and estimations of the blood content of urea and creatinin, are the most important tests of the patient's metabolic state and renal efficiency. If these tests on several different days show a back-up or concentration of these elements in the blood and a deficiency in the urine, the evidence is complete that the kidneys are lacking and are not sufficint to warrant surgery. Phthalein is perhaps the most popular of the dye tests for elimination or filtering power of the kidneys. It has been objected to because the kidney function or permeability differs for each one of the many different principles it is called upon to excrete, both in health and in disease; that phthalein merely shows the permeability of the kidneys to one dye at the moment of administration and is a very one-sided picture. These objections are very correct, but the clinical fact remains that it is the best test we have for this purpose, and that it must always be used in conjunction with other tests. Braash, at the March meeting of the American Urologic Association at New York, brought out a very important point in the use of phthalein. When injected directly into the blood stream the filtering or elimination ability of the kidney is very accurately shown. When injected deeply into the muscle, absorption and elimination takes place rapidly, but a condition of acidosis causes a slower absorption of the dye into the blood stream. This point is very valuable to remember, since prostatics are prone to acidosis. Patients may have a very low elimination when first seen, less than ten percent many times. The interval between operations will often show an improvement reaching fifty or sixty percent. I hardly feel safe with a percentage of less than thirty-five, although this is influenced greatly by the blood picture.

Impairment of other organs, such as the heart, lungs and bowels, the mental and nervous condition, will improve along with the increase in kidney elimination. These organs usually require some special attention, and must be carefully watched and their worth assayed.

The preliminary suprapubic cystotomy may be performed any time after we have found that emptying the bladder does not interfere with kidney activity. This can be done under local anesthesia and proves no load or shock to the patient's impoverished physical state. The interval between the two steps is utilized in building up the patient. The ideal in view is to get the patient out of bed, to have him walking about, and to have him conscious of a feeling of well-being equal to that obtaining before prostatic interference. This may require any time up to several months to obtain.

The increase in kidney elimination is one of the benefits accruing from the interval between operations. Another is that the benign prostatic tumor will decrease in size. I have found them at times apparently shrink half the size when first seen. These tumors are nearly always congested and swollen from straining, catheterizations, or infections when they first come to the surgeon's attention. Passing the catheter, or the tied-in catheter, will maintain some irritation, and the shrinking of the tumor is not so great as following suprapubic drainage. The interval between operations permits the patient to become stronger and at the same time his tumor becomes smaller.

The treatment up to the second step has all been preparatory. Everything has been done with a view to increasing the patient's resistance to surgery and decreasing the shock of surgery. He is up and about the room, walking in the halls, and if the weather permits, out in the yard. His eating has been regular, his sleeping largely undisturbed, though wet, he is mentally brighter and his courage is good. He has become optimistic. His tongue is no longer dry. His skin has lost that parched and doughy feel. His bowels have become regular in habit. His senile asthmatic or bronchial conditions have received the attention needed. He feels better than for several years and he is anxious for his surgery. The prospect of the first operation had filled him with fear and dread, but the actual operation disturbed him so little that he approaches the second operation with great confidence and assurance.

Removal of the prostate would be classed as a bloody operation. In the usual case, bleeding is controlled without any special measures to stop it. It is only when the enucleating finger strays beyond the surgical capsule that free or furious bleeding occurs, the periprostatic tissue outside the surgical capsule being rich in blood vessels. I have been in the habit of placing a Hagner bag in all of my cases, because I have never found any untoward effect and it does permit me to go home and to bed with a greater confidence in my ability to control quickly and easily any secondary hemorrhage that may occur. The tension of the Hagner bag is released in a few hours, the bag deflated and removed during the second day. The patient will complain of frequent bladder straining from the presence of the bag, and the suprapubic tube when deeply placed, which is promptly relieved on their removal.

The patient is given water freely up to the time he leaves for the operating room, and if gas-oxygen anesthesia has been used he may have it within an hour or two after returning to his room. Hiccoughing or other symptoms of threatening uremia must be met with heroic use of the water cure, the Murphy drop, hypodermoclysis, or intravenous use of normal salt or glucose until the symptoms disappear. Strychnia is one of the best stimulants of these old hearts. I have been putting them on it during the preparatory period and keeping it up well into the convalescent state. If the general strength will permit, the patient is given a physic, and feeding is started on the second or third day after operation. He is allowed up to the commode and up in a chair the following day for short periods. Getting out of bed has a wonderful psychic effect; his appetite and interest in things in general increase rapidly after getting up. The patient need not be kept in the hospital until the wound completely heals if he can return for observation. After the immediate operative emergency has passed, the surgical treatment is largely routine.

The clinical objective of our therapy is not the removal of a tumor, but the re-establishment of normal urinary bladder function. This may be interfered with by distortion of the bladder neck, complete atresia through closure at the site of internal meatus, small nodules or fragments of tumor that escaped attention at operation, and organized blood clots which may become encrusted with urinary salts with stone formation. The atrophic bladder, with huge quantities of residual urine and large type of tumor, is most liable to be followed by this sequela. However, this type is usually restored to reasonably normal function. Complete urethral atresia through closure of the bladder mucosa at the site of the internal meatus occurred in one of my cases. The wound reopened after going home and no urine could be voided urethrally. It was impossible to pass a sound into the bladder by way of the urethra. With a cystoscope through the wound, and a sound in the urethra, the tip of the sound could be seen pushing up the thin layer or diaphragm of mucosa that had grown over where the prostate had been. The internal meatus was represented by a small dimple, through which the tip of the sound could not be pushed. Normal function was re-established in this way: A metal catheter with an opening in the distal end was passed, the tip pushing against the dimple representing the internal meatus, guided by the cystoscope through the wound. Wire was threaded down the metal catheter and easily punched through into the bladder as seen by the cystoscope. The wire, acting as a guide, permitted the rapid dilating of the internal meatus, followed by closure of wound and a return to normal function.

Persistence of a cloudy urine after operation suggests fragments of tumor left behind, blood clots possibly encrusted with urinary salts, infection higher up or due to a diverticulum. Cystoscopy should be done routinely on all cases before final dismissal, for one's own protection as well as for the benefit of the patient.

While the immediate cure is obtained in three or four weeks after operation, the patient's condition, both local and general, continues to improve for many months afterward, dribbling often disappearing with the lapse of time. The majority of patients continue to get up once or twice at night, but this does not disturb them, and they are very happy with their approximately normal condition which permits them to again enter social activities and take renewed interest in their affairs.

DISCUSSION

DR. FRANK H. JETT (Terre Haute): Cunningham several years ago laid down a simple procedure which is correct so often that it is very valuable. That is, have the patient urinate and empty the bladder as completely as you can. Then pass a catheter and see if he has residual urine and how much. A patient with so-called bladder trouble, who comes to the general practitioner, deserves this test. If with treatment over a reasonable time, residual urine is found to increase, the case certainly deserves a more extended examination by someone competent to do it, and perhaps prostatic surgery. If this can be driven home, there would be more early cases. If this is done, we will be doing less prostatic surgery with kidney lesions and the other general disturbances caused by kidney

lesions. This will put the weight of early operations on the man who sees the case first.

The essayist said no truer thing than that a prostatic obstruction case is not a prostatic case but a general case. The general condition of the patient must be the first consideration.

Just recently I did a one-step prostatectomy on a man 65 years old, and the man went through the operative period in perfect shape. There was very little reaction. A little over a month ago this same man had an attack of uremia, was unconscious for a few days, coming out of this before I operated on him. He looked well; ate well. His residual urine had been decreased gradually by catheter and he was in good shape generally. This man was suffering from urinary back-up and not an infection.

In regard to preliminary drainage, some do just as well with a catheter, and it is certainly simpler than a suprapubic drainage. It is not so good, however, in patients who are seriously sick and are going to have a prostatectomy. It seems to be well established now that after the obstruction is removed or drainage is instituted, there is a decrease in kidney function, and disturbance of the blood pressure which perhaps persists for a few days, then there is a gradual rise in kidney function until it is a great deal better than before drainage was instituted. It is also well known that infection in a suprapubic wound will auto-inoculate the patient in a few days' time and make him very resistant to this sort of infection. The danger of operating on a seriously sick patient is first, shock; second, hemorrhage; third, loss of kidney function; fourth, infection of suprapubic wound.

After suprapubic drainage is done under local anesthesia at your first or preliminary operation, you are getting rid of infection and loss of kidney function, which leaves you to consider in the second stage of the operation, shock and hemorrhage. In other words, you do not put all of your eggs in one basket.

A prostatic tumor should be taken out cleanly, staying in the line of cleavage, and if you are able to stay in this line, there is practically no hemorrhage. Regardless of which operation is done, the operation must be done with the fingers, and it is the educated finger that does the good operation. I have seen Dr. Wishard do his old, small incision operation quickly and nicely, and as to results, I personally know one case he operated fifteen years ago. I recently tested the man out, and he has no residual urine. The man is in good condition.

I think it is important for us to remember that the benign prostatic growth is, as a rule, adenoma, and the capsule of this so-called prostatic hypertrophy is compressed prostatic tissue; that we are not doing a prostatectomy, but removing an adenoma; that the size of the adenoma means nothing, amounts to nothing, but the amount of residual urine, or the obstruction it causes, means everything; that there is a difference between bladder obstruction and bladder, ureter and kidney infection.

The future of prostatic surgery depends to a great extent on the man who sees these cases first. It is not necessary to make excuses for the mortality by prostatectomy now, but it can and should be improved.

DR. J. C. FLEMING (Elkhart): There are just one or two points I want to touch upon. In the first place, the present mortality in the hands of the general surgeon, according to Deaver, is twenty percent. According to Keyes, it is forty or fifty percent. There is something wrong or we would not have this terrific mortality. I want to discuss for a few moments the cause of that mortality.

In the first place uremia is given as the cause in something like 25 or 30 percent of those who die. That means that we have not observed the cases properly, our preliminary observation has not been careful enough. These cases should be recognized.

The two or three-step operation which has been advised by the essayist and by the doctor who has spoken in discussion is certainly the one to be used. It gives you an opportunity to observe the patient and get a better idea of his condition and his ability to withstand the operation. There is another advantage in the two-step operation which was referred to by Dr. Keyes, and that is that in the first stage the feeble cases die and you can brag about those who survive the second stage.

The second cause of death following a prostatectomy is sepsis. Those cases that die of sepsis die because they are operated too soon. This second stage is done too soon. If the bladder is septic it should be allowed to clean up and the patient in good condition before the second operation. If it is necessary put in a drainage tube and let the patient go home and stay several weeks before attempting the second operation. In that way a great many cases that would otherwise die of sepsis will go through safely. I think a great many of the deaths following prostatectomy in the hands of the general surgeon are due to the failure to differentiate between benign tumor and malignancy. We must remember that 20 percent of these cases are malignant, and if a man attempts to do the ordinary prostatectomy which he would have to do for a benign tumor on a malignant case he will tear through the capsule of the prostate and cause hemorrhage or sepsis and his patient will die. So that during this whole course of handling a prostatic case we must

bear in mind the great importance of distinguishing these cases that are malignant. Malignancy comes on later than the benign prostatic growth. That is, a large majority of cases that come on after seventy are malignant. Then, too, you can usually determine by physical examination whether a case is malignant or not. On rectal examination you will find areas of hardness throughout the gland which you do not get in benign tumor. With the sound or cystoscope in the urethra and one finger in the rectum as you palpate the sound, and as you reach the so-called trigonal or V shaped area between the two lateral lobes of the prostate, you can usually tell whether the case is malignant. In malignant cases we have this V shaped area indiviatro. It is irregular; it is not smooth. In other words, the malignant cases tend to go upwards towards the seminal vesicles and beyond the confines of the prostatic capsule. Then the malignant cases have more lancinating pains and sciatical. On cystoscopic examination the malignant cases do not show a smooth, round mound as in the benign condition. In the malignant condition you are apt to find edema, ulceration and papillary outgrowths, all of which suggest malignancy. Then when we have exhausted all of our methods of physical examination preceding operation, after we have done our first stage, our suprapubic cystostomy, we should again try to determine whether the case is malignant or not. I have made this rule in preliminary cystostomy, to put one finger in the bladder and the other finger in the rectum and palpate the gland carefully and try to determine in my own mind whether the case is malignant or not. If it is malignant, let it alone or send it to somebody who is experimenting with radium, or to Dr. Hugh Young, or some expert genito-urinary surgeon, and let him do a radical removal of prostate; but I think a great many of the deaths following prostatectomy are an attempt on the part of the general surgeon to treat malignancy of the prostate as we would treat a benign hypertrophy. Keyes says a benign hypertrophy patient should never die from prostatectomy. That may be an exaggeration, but the mortality should be very small if the patient is properly prepared and properly selected.

DR. A. M. HAYDEN (Evansville): I want to congratulate the doctor on his paper, especially because he lays great stress on preliminary treatment. The cases of prostatic hypertrophy, be they cancerous or benign, usually occur in old people, and every case that comes to the surgeon for treatment comes with crippled kidneys. You operate on that patient with the crippled kidneys and you will lose him. The important thing in the treatment of prostatic hypertrophy prior to the operation is to get the kidneys functioning properly. There is a way to determine this. In the phthalein test we have a chemical test that will determine whether the kidney is functioning properly before the operation.

The doctor speaks of the two-stage operation. The first operation is just to give drainage and clear up the bladder, relieve the back-pressure of the kidneys. You will not get the kidneys to function properly unless you drain the bladder. I do not know that there is any advantage in draining through the suprapubic region over drainage through the urethra, and I do not care whether it takes three weeks or six months, I will not operate until the kidney functions properly. I want them to eliminate 60 to 70 percent, and to eliminate urine practically free from pus, acid urine that will show from 60 to 90 percent urea. You get a patient showing 60 to 90 percent of urea and eliminating from 60 to 70 percent by the phthalein test in the first two hours, and that patient will stand the operation well, whether he be ten years or one hundred years old. I speak of the suprapubic operation.

In regard to cancer of the prostate, I have never been able to determine positively beforehand whether I had a benign tumor of the prostate or a cancerous tumor, and for that reason I have practiced the Young operation, doing an outside operation. If we have any hemorrhage to control it is done before we leave the patient. If we have anything that looks like cancer we remove the entire prostate and capsule, and I want to say that twenty percent of tumors of the prostate have proved to be cancer. We make it our rule to have every prostate we remove examined under the microscope so as to determine whether it was or was not malignant. If you have a cancerous tumor of the prostate and you do not make a radical removal your patient will have trouble again and die. If you make a radical removal of the capsule and all, provided you get the case before the cancer cells have gone beyond the capsule, you will cure your patient. That has been my experience. I remember a case of cancer of the prostate, very large, that I had Doctor Wishard see with me eight or nine years ago. He as well as I and Doctor Alburger agreed it was cancer. That man is living today and perfectly healthy. We removed the entire prostate, the capsule and the trigone of bladder.

The gist of the whole thing in determining when to operate for prostatic hypertrophy is to get your kidneys to function properly. If they function properly you can go ahead and operate, no matter how old the man is.

DR. H. G. HAMER (Indianapolis): Prostatectomy is seldom, if ever, an emergency operation. That we can lay down as a starting point. I am wholly in accord with the methods of

preparation outlined by Dr. Crockett in his excellent paper. By prolonged catheter drainage, or if that is not well borne, suprapubic cystostomy and the insertion of a large tube, a period of observation is obtained during which the patient's general condition can be carefully studied and his fitness for operation determined. His fitness for operation will be determined by the general observation at the bedside, by observation of the amount and character of the renal secretions, by urinalysis, by the phthalein test and the blood urea and creatinin tests. By these observations we ought in a reasonable length of time to be able to determine his fitness for operation.

The selection of the type of operation depends wholly upon the conditions with which one is confronted. The one-stage operation may be selected if the man's condition is excellent and the growth is not large. However, if his condition is poor, the two-stage operation is always better. The results are uniformly more satisfactory. In a word, I would say that careful preparatory treatment, with special emphasis upon securing information by every means possible of the patient's fitness for operation, the selection of an operative procedure calculated to reduce the risk to a minimum, the selection of the proper method of anesthesia, control of hemorrhage, and good nursing are the things upon which we base our expectations of good results following prostatectomy.

DR. P. E. MCCOWN (Indianapolis): The weak point of a suprapubic prostatectomy is the hemorrhage. The Hagner bag is perhaps the best method of controlling hemorrhage. However, as Doctor Crockett has said, the Hagner bag is a thing of torture, and in most cases you must keep the patient under morphine. It has occurred to me, since we have no better surgical measure to control the hemorrhage in suprapubic prostatectomy, that we might get along if we would use measures to first ascertain the coagulability of the blood. Where we have a blood that shows coagulation in two to four minutes it has been my custom not to use any measure to control hemorrhage. If the prostatectomy is properly done the finger does not go beyond the surgical capsule, and if the enucleation finger adheres closely to the prostatic adenoma the hemorrhage is simply that which oozes through small veins. My idea of a suprapubic prostatectomy is removal of an adenoma leaving the normal prostatic tissue, and this must be true because a great many patients have a return of sex function. Instead of packing with gauze, etc., we make an investigation of the coagulability of the blood, and where it is necessary use such methods as the administration of calcium salts or the various hemostatic serums, to increase the coagulability, and we find we have a much more comfortable patient. He loses some blood, but not enough to lower his resistance, he gets out of bed early, he has early healing of his wound because of lack of traumatism to the mucous membranes, and I believe that is the best method of getting around this matter of hemorrhage. It is not of course a complete method, not as adequate as we would like, but at least it is a way of doing away with the danger of severe hemorrhage.

Another important thing is to get these patients operated early. We find a number of cases who have gone through prostatectomy where interstitial nephritis was present, and these cases have no difficulty aside from the kidney condition, a condition which we cannot eradicate.

DR. JOSEPH RILUS EASTMAN (Indianapolis): I wish to say a few words concerning what I regard as a most important factor in reducing the mortality of prostatectomy. It has been touched upon by the gentlemen who have spoken. I refer to the performance of prostatectomy under local anesthesia. As Doctor Hayden says, these patients are practically all nephritics; they have crippled kidneys, and to give these men a general anesthetic is in many cases entirely unnecessary. Kindly acquit me of making a sensational statement when I say that suprapubic prostatectomy can nearly always be done under local anesthesia even in the bed. I wish to adjure particularly the younger men to do suprapubic cystostomy, and remove adenomas of the prostate with the finger under local anesthesia, principally because of the very great ease of enucleation by that process. It is a very simple and gratifying performance. Why give ether or any inhalation of anesthesia to a man with crippled kidneys when we can easily take the adenoma out through the suprapubic wound under local anesthesia?

John B. Deaver, in a recent number of *Surgery, Gynecology and Obstetrics,* said that he had not the time to do a prostatectomy, suprapubic or otherwise, under local anesthesia. I submit to you that if Deaver, or any other great and brilliant man, has not time to give his patient the benefit of this life-saving procedure, then it is his solemn duty to turn that patient over to some man, perhaps of less skill, who has time to give to his patient the benefit of this safeguard—prostatectomy under local anesthesia.

DR. CHARLES STOLTZ (South Bend): Whenever I want to hear a particularly moribund subject discussed I look for a paper on prostatectomy. In most surgical procedures the recoveries are above fifty percent, but in prostatectomy we still have the everlasting discussion of the high mortality.

There is perhaps no simple procedure in which the general practitioner, or even the surgeon or diagnostician, lacks so much as in the rectal touch. I recently had a man of middle age who had been pawed over by a half-dozen members of the profession. Rectal touch demonstrated a prostate full of calculi.

I recently examined a Civil War Veteran who had for years been getting up four or five times a night to urinate. He was praising his medical practitioner, saying how long he had kept him going by treating his kidneys. Rectal touch demonstrated his prostate to be as big as a grapefruit; and the doctor has treated him so long that I do not believe any surgeon would care to take the moribund old man to the operating table.

Doctor Fleming spoke of sending these cases of malignancy to the man who is "experimenting with radium"—a fine pleasantry of Doctor Fleming's, but I don't think much of the procedure. Cancer of the prostate is to me a hopeless affair. Kolisher of Chicago says when he goes into a prostate and finds malignancy he backs out. One such fellow whom I operated a year ago is taking so much morphine that the druggists are wild.

The proper preparation of the patient and the early recognition of prostatic trouble is going to reduce the mortality more than anything else. You cannot take a wrecked human machine and rebuild it. We want to be fair, and while it is all right to be introspective, I think we should demand that cases brought to us have at least fair treatment before they come.

Doctor Eastman's urging local anesthesia is timely. I agree with him that if a man has not time to do the thing right he had better let somebody else do it.

I make a perineal incision up to the prostate big enough to insert the left index finger and then do a suprapubic prostatectomy. Working with both fingers instead of one I can sometimes do more with the lower finger than with the one in the bladder. With these two openings I can guard against hemorrhage very satisfactorily by packing. I close the suprapubic wound and put a large drainage tube in below. A very good surgeon once said there is no use putting in a perineal tube, that it does not drain. You can drain through any tube that is open. If you will insert an ordinary catheter into the bladder through the tube and then take an ordinary ear syringe and rinse out the bladder, the perineal tube will drain.

The thing I want to emphasize is that we cannot realize low mortality in prostatic surgery until we have the profession at large educated to recognize these cases and get them to operation early, just as we are educating the laity and profession to look out for malignancy and get it to operation early. When the patient is a wreck surgery is hopeless.

DR. BERNHARD ERDMAN (Indianapolis): I would like to say just a word or two on the question of mortality: Some two or three years ago at the meeting at Evansville, and again last year at Indianapolis, Doctors Wishard and Hamer reported 120 cases with but two or three deaths. Doctor Fleming's statement of Keyes' statistics is very dissimilar. In the hands of the general surgeon the mortality remains high, while the trained urologist has an ever increasing percentage of recoveries. Perhaps the most important statistics covering a large number of cases are those of Fauchet of France who has done probably a thousand or twelve hundred operations with a mortality of about 10 percent for the first 400. In the last 100 less than 4 percent.

I do not believe the mortality of prostatectomy, in the hands of men who will prepare their patients as Doctor Crockett suggests, will be anywhere near 10 percent. Take the cases as they come, it makes no difference whether you make the preliminary operation above and drain and remove through the suprapubic opening or remove the gland and then drain from below, as recently suggested by Ochsner.

The whole thing rests upon the ability of the individual to prepare himself for what is still a surgical procedure of considerable moment even in the hands of the competent urologist.

DR. FRANK S. CROCKETT, Lafayette (closing): The two-step operation is very important in that the first step, whether suprapubic cystostomy, tied in catheter or frequent catheterization, is what produces the result. Doctor Fleming spoke of the septic condition of the bladder. He feels that the cystitis must be healed before he goes into the second step. I do not believe we should refuse the second step in a man whose bladder will not clear up, because many times we have conditions which are practically impossible to clear up until you take the tumor out.

Speaking of malignancy, my personal experience has been that the pathologist has found some malignancies that seemed to be benign adenomas to the rectal touch. Still these patients make a good postoperative recovery and are apparently well, the malignancy not having gotten out of the surgical capsule.

The interval between the two steps permits the doubtful cases to become plainer, as the shrinking of the tumor will bring into prominence the carcinomatous nodule. In 1914 I was in St. Peter's in London, and they had a large number of these cases. They used nothing to check the blood but hot water in the bladder, or in case of violent bleeding they would pack.

Nothing was used to stop the bleeding, such as packing gauze, the Hagner bag, or some of the other clever things devised for that purpose. The advantage of the Hagner bag is that it will give the patient less discomfort while it is in and in getting it out. It is easy to pack the prostatic cavity because the patient is under an anesthetic, but when you take it out the gauze packing will produce more discomfort than when taking out a Hagner bag.

SUBCUTANEOUS INJURIES TO THE LIVER*

BY

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In cases of abdominal injury, the liver is more frequently involved than any of the other solid viscera. Johnson, in reviewing a series of 365 cases of subcutaneous injuries to the solid abdominal organs, found the liver injured in 189, while the total of the kidneys, spleen and pancreas was only 176. The preponderance of hepatic lesions is due to several factors: *viz.*, the great size of the liver, its friable nature, and its anatomical position. All these things make it more liable to injury by indirect violence, as by falls from a height upon the feet or buttocks, or upon the abdomen in falls in water. Moreover the right lobe, lying as it does wedged in between the ribs and the spine and rigidly anchored by its firm attachments, is peculiarly susceptible to crushing injuries, such as run-over accidents, crushing between cars, blows from a club or kicks over either the upper abdomen or lower thorax.

In subcutaneous rupture of the liver, the right lobe is most frequently involved. W. H. Battle, writing in *Practitioner*, July, 1910, reviews the combined statistics of Mayer and Ogston which show that injuries to the right lobe bear the relation to left lobe injuries of *three to one*. There is, of course, a great variation in the size and shape of the tears, which may be linear or stellate; a part of the substance of the liver may be completely separated, as in a case of the writer's; the liver may have merely a severe contusion with the formation of a hematoma in the liver substance; the liver may be more or less completely torn away from the diaphragm as in a case reported below; or it may be crushed and broken into pulp.

Certain pathological conditions predispose to liver injuries, and among these may be mentioned alcoholism, liver tumors, malaria, syphilis, tuberculosis, and amyloid degeneration. Any local or systemic change which causes enlargement or softening of the liver makes it more susceptible to injury.

*Read before the Twelfth District Medical Society Meeting, Fort Wayne, November 10, 1920.

Rupture of the liver carries a high mortality. B. T. Tilton, Annals of Surgery, reported twenty-five cases collected from New York hospitals for a ten year period with a general mortality of 44 per cent. Twenty of these cases were operated upon early with a mortality of 40 per cent; the mortality of unoperated cases was 62½ per cent. Terrier and Ouvray report forty-five cases, all operated, with a 30 per cent mortality. Among the more severe complications of liver injury may be noted fracture of ribs, rupture of lung, spleen, or kidney, or more rarely, some part of the alimentary canal.

The symptoms of subcutaneous rupture are, generally speaking, those of shock and hemorrhage. In any severe injury of the lower right chest or upper right abdomen, especially if the chest shows severe contusion or fracture of lower ribs, the possibility of liver injury should be borne in mind. Quite often, however, the symptoms of shock may be lacking immediately after the injury; in fact, the pulse may be considerably slower during the first few hours. Several writers have mentioned this bradycardia as of diagnostic import, and Finisterer was able to demonstrate it in twenty animals in whom he experimentally produced liver injuries. He also reports two cases of liver rupture which showed pulse rates of 48 and 52.

The most constant symptom is pain in the abdomen. This pain is severe and persistent, usually referred to the right side and is due largely to peritoneal irritation from escaped blood. Rigidity of the abdominal muscles is fairly constant. This condition also is due to escaped blood and is usually not marked immediately after injury. Tenderness can be elicited in the region of the liver; the ribs of the affected side are less movable; often there is difficulty in breathing, and occasionally there is pain referred to the right shoulder or scapula. When bleeding occurs, the blood usually accumulates in the right iliac fossa. The liver dullness may at first be increased. Immediate loss of liver dullness indicates a rupture of stomach or bowel, with accumulation of gas between liver and abdominal walls. Later disappearance of the dullness means bowel distension due to peritoneal irritation. Jaundice may appear in from two to four days from absorption of bile from the peritoneum. This symptom is more marked and more constant in injuries to the bile tract.

In many cases of indirect injury, as in falls from a height, an exact diagnosis can not be made until the abdomen has been opened, the general symptoms of shock, hemorrhage, abdominal pain, vomiting, hiccough, etc., merely indicating injury to some abdominal viscera, the one at fault being discovered only at operation.

Undoubtedly many of the less serious injuries to the liver recover without their existence having been discovered.

The treatment of the condition is of course, essentially surgical. In this country, suture of the liver is done wherever possible. Wherever the technical difficulties of suture are too great, gauze packing alone is relied upon. Some of the foreign operators use gauze packing entirely, preferring it to suture as being both quicker and safer.

Following is the report of 5 cases of subcutaneous injury to the liver:

Case 1, Laborer, age 37. Pushing locomotive driving wheels along track, when second pair of wheels rolled down, crushing right lower chest and upper abdomen between them. Brought to Sacred Heart Hospital in ambulance. Conscious, complaining of intense abdominal pain, with dyspnoea. Bloody expectoration. pulse 80. Pulse rate rapidly increased with signs of hemorrhage. Subcutaneous emphysema, dullness of right chest and abdomen. Death in 24 hours. Autopsy showed perforated lung with hemo-thorax, and multiple lacerations of the liver.

Case 2, Brakeman, age 27. Sitting at table in caboose writing report, when train broke in two, the sudden application of the air brakes in the rear section throwing him against the table with great violence, striking right upper abdomen on edge of table. Admitted to Sacred Heart Hospital at midnight, about three hours after injury. Pulse 90. Rigidity of right abdomen with tenderness on pressure, some dullness in right iliac fossa. Complained of severe constant abdominal pain made worse by deep inspiration. No particular evidence of shock or active hemorrhage being present, it was decided to observe him until morning, when aside from some slight distension his general condition was found to be better. The third day after injury developed jaundice which became marked, and then gradually subsided. Dullness in right iliac fossa gradually disappeared. Discharged from hospital at end of two weeks.

Case 3 (Case of Dr. J. F. Thomson), farmer, age 45. Kicked in upper abdomen by horse. Admitted to Sacred Heart Hospital about one hour after injury, complaining bitterly of pain in upper abdomen and right shoulder. Pulse 82. No mark on abdomen. Right muscles extremely tense, with great tenderness on palpation of liver region. Dullness in right flank. Immediate operation advised and accepted. Incision through upper right rectus. Abdomen filled with blood. Lying free on surface of transverse colon was a piece of liver about 3x2x½ inches in size. Exploration showed tear through liver just to right of gall bladder sulcus, extending through entire thickness of liver, and about three finger breadths in depth. Bleeding controlled by gauze pack and wound closed. Gauze removed on seventh day. Patient discharged from hospital at end of third week.

Case 4, Railway Conductor, age 43. Thrown violently against table in caboose when his train was suddenly stopped by emergency application of air brakes. Admitted to Sacred Heart Hospital two hours after injury, suffering intense abdominal pain. Pulse 80. Muscular rigidity over upper abdomen. History stated that for years had had small umbilical hernia which at time of examination was about the size of hen's egg, tense and irreducible. Immediate operation. Elliptical excision of umbilicus and hernial sac. Exploration of abdomen discovered sub-serous hematoma of anterior surface of right lobe of liver. Wound closed with repair of hernia. Discharged in three weeks.

Case 5 (case of Dr. Woodward Hays, Albion, Ind.), farmer, age 46. While engaged in putting roof on barn, nails securing to roof piece of lumber on which he was standing, pulled out, permitting him to slide down slope of roof. He fell a distance of about 18 feet, striking a pile of lumber on the ground. He stated that as he fell, he saw the lumber and fell with arms outstretched in an effort to bridge the pile. He struck first on his hands, one on each side of the timbers, and then his upper abdomen struck as the weight of his fall flexed his arms. Admitted to Sacred Heart Hospital about four hours after injury. Pulse rate of 80. Lacerated wound over right eye; abrasions of both hands and forearms; swelling of both wrists. No mark on abdomen. Intense, constant abdominal pain, referred more especially to upper right quadrant. Some dullness in right iliac fossa; muscular rigidity. Upper abdomen tender to palpation. No blood in urine. Operation (half hour after admission). Incision through upper right rectus. Considerable free blood in abdomen. Blood found to be trickling down over anterior surface of liver. Further exploration showed a separation of liver from attachment to diaphragm. Bleeding controlled by gauze pack; wound closed. Gauze removed on seventh day. Discharged from hospital on 18th day.

THE PHYSICIAN

THE FAILURE OF MODERN MEDICINE TO PROPERLY EVALUATE PHYSIOTHERAPY*

By FRANK B. WYNN
INDIANAPOLIS, INDIANA

The over-weening influence of drug therapy for centuries past, perpetuated through both lay and professional prejudice, has militated against reforms and the introduction of other methods

*Twelfth of a series of articles by Dr. Wynn which will appear regularly in THE JOURNAL.

of treating disease. Dignified by age, endorsed by custom, and approved by the profession, medicinal therapy has frowned upon physical therapy as belonging to a lower class; suspected even of being non-professional. The physician who dared espouse these agencies with enthusiasm was at once suspected by the staid profession of having a mercenary ax to grind; if indeed he was not stigmatized as an out-and-out quack.

Under the term physiotherapy are comprehended those natural forces which, when properly applied, have to do with maintenance of health, comfort and even life itself; or when misused or abused, are provocative of disease; and when carefully studied and skillfully applied become most valuable in a curative and preventive sense. Some of the more common of these are: Food and drink; air—cold or warm, stagnant or circulating, dry or moist; light, sunshine, darkness; water—by ingestion or hydro-therapy; heat or cold; exercise—graduated, active or passive; rest—mental or physical; isolation and seclusion; amusement and recreation; interest and occupation.

Have these things received the consideration at the hands of scientific medicine which their importance demands? Through all the tedious centuries of evolution in civilization, they have, from necessity or choice, been employed in disease, with real or supposed benefit to the patient. There is in all of us a deep ingrained faith in their efficacy. Whose memory does not hark back to the days of childhood, when a solicitous mother or the benevolent family doctor did not have recourse to them? Even now my senses are stirred by the memory of hot poultices—redolent with onions, mushy with bread and milk, or sticky with flax-seed; of tingling counter-irritants and smelly fomentations; of dry heat and moist heat; of hot drinks and cold drinks; of gentle and affectionate hands stroking away pain or limbering up stiff joints; of cheering words and exhortation to patience, faith and grit to go through with a disagreeable job—all that complex which makes up the warp and woof of the childhood of ordinary folks.

Should the profession taboo these common domestic methods of treatment simply because universally employed? It were as wise to abandon the use of bread because almost universally eaten by the human race. Finer wisdom would be shown if we set about studying these common things scientifically and applying the knowledge in the conservation of health and the cure of disease. Use them we all do, but how much systematic and thorough instruction concerning them did any student ever receive during his college course? Lengthy consideration and great emphasis were placed upon drug administration, surgical methods of relief, and recently vaccines and antitoxines, but as for physiotherapeutic measures—these were viewed as mere excusable fillings, designed to calm the mind of the patient, soften the tense anxiety of relatives, and make things easier for the medical attendant. These indisputable truths are strange commentaries on the defects of medical training. When we come honestly to weigh the truth, it is appalling the ignorance of the profession concerning these forces which we should utilize with the finest skill and the most acute intelligence.

A few common illustrations may be offered showing the usual bent of professional thought as to the relative value of pharmaceutic as against the physiotherapeutic methods.

A coated tongue, fetid breath, headache and highly colored urine, suggest toxemia for which the vast majority of physicians will prescribe calomel followed by a saline—missing the larger factor in relief which would come from proper diet, free fluid ingestion, proctoclysis, and properly applied hydrotherapy.

A pale, wan child is secluded in a dark, stagnant room, given iron for its anemia while its rebellious nature yearns for sunlight and the outdoors. It is taught to abhor circulating air, forgetful of the fact that this very movement of the air heightens its life and blood-making value, just as the ripples and cataracts purify water. It is fed upon broths when nature craves the succulent, fresh vegetables and fruits—with their scouring, cleansing properties to the bowel, and their chlorophyll content, so potent in blood formation. This delicate child needs these natural blessings and it is one of the highest functions of the physician to know how to bring the little patient under their benign influence. In the early spring-time I plant indoors in boxes the tiny seeds which burst their protective coats, rupture the soil-crust, and thrust their white petals toward the light; actually leaning forward to receive the welcome sun-rays; and finally exchanging their anemic pallor for the sturdy, beautiful green of the growing plants. Is not this an eloquent sermon upon physiotherapy? Should we be less wise than the unthinking plants, regarding the value of sunshine?

Think of the great army of American constipation! The vast majority of these innumerable hosts are women—devotees at the shrine of aloes and cascara. But do even these efficacious remedies work a cure? Let us rather say they establish a habit. If complete relief is to be enjoyed it must come chiefly through the proper application of physiotherapy—copious water ingestion, coarse, bulk-forming and succulent

foods, which are both exercising and scouring to the intestines; and that form of bodily exercise which brings the abdominal muscles into frequent and prolonged activity. True it is difficult to combat the social customs of modern times, the tendency of American women of the so-called upper classes to physical idleness and enervating pursuits. The easy and lucrative way for the profession is to fall in line with indolent habits, the pink teas, card clubs and whirl of social engagements with their irregular hours and excesses—and continue to prescribe laxatives as a routine. A larger, more wholesome and more permanent service would be rendered the individual and the community by insistently inculcating the doctrine, and following it to execution, of more active participation in the physical labor of the household; of more frequent open-air recreations which develop the muscular system, stimulate pride in physical accomplishments; or better still where possible the cultivation of growing things—flowers, shrubs, fruits, vegetables, etc. More difficult let us admit, is the execution of such a program, than the writing of a prescription. The successful accomplishment of this task requires, on the part of the physician, first, the art of persuasion; and secondly a generalship which plans with far-sight for the winning of the battle and brooks no deviation from the orders given. On the part of the patient there is demanded unwavering faith in the wisdom and sincerity of the medical commander and a firm determination to see the thing through to a successful finish. To break one of the habit of chronic constipation is a tedious and difficult task and is worth a good price. If we would cure, rather than temporize with and cultivate it, we must proceed by the physiotherapeutic route.

Or the subject of consideration may be a successful man of affairs—desk-ridden, plethoric from overeating and under-exercising, bowels rebellious under their load, liver enlarged, tender and skin icteric, throbbing heart, pounding headache, and high blood-pressure; a man keen, tense, ambitious for large results, and explosive under the nagging irritations of his great responsibilities—how is he to be treated? Shall we seek his relief by draining the gall-bladder, cholagogue purges, or hepatic stimulants? Should we reduce his blood-pressure by cardiac depressants, or remedies inducing vaso-motor relaxation; relieve his headache by coal-tar derivatives and quiet his nerves with bromides? One or the other of these things may be indicated. Or may we not with even greater wisdom map out for him an entirely new order of living—holding up perhaps for his temporary emulation the oriental philosophy of passivity rather than the restless, driving ambition of the occidental races; exhorting him to restful contemplation for the sake of his peace of mind; inviting him into the paths of tranquilizing Nature for his tired nerves; for the sweetening of his irritable disposition, suggesting the fairyland of wonders and beauties found in the great outdoors.

Of all diseases what is comparable in vital interest, to both physician and layman, with pulmonary tuberculosis? So familiar is the world with its prevalence and ravages, that statistics need not be quoted. Only a few decades ago, its hopeless gloom dampened the ardor of the physician and enshrouded the victim of this malady with despair. Quackery made easy prey of these pathetic sufferers, for in the current of despondency they grasped at straws. Under alluring promises they were persuaded to swallow benumbing narcotics, to induce rest, relieve cough or pain, and stimulants which aroused only artificial strength; finally sinking under the wave of mixed infection and toxemia.

Thanks to the discovery of its cause and a better understanding of its management we now look upon pulmonary tuberculosis with hope, confident of its prevention, arrest or cure. What has wrought this marvelous improvement? Has it been through the legerdemain of a medicinal potion? Aside from the great value of opium in controlling cough, pain and restlessness, the reactive tissue repair in some chronic conditions to iodine products, and the use of tonics, what claim can drug therapy make for the extraordinary advancement achieved in the management of pulmonary tuberculosis? Are we not bound to admit that the great blessing of progress in the treatment of this protean malady has come about almost entirely through physiotherapeutic factors; that is to say, in prevention and management we have come to a better understanding of the natural forces—air, sunlight, food, rest, exercise, recreation and occupation? Yet with these vast and convincing evidences of progress before the profession, can we truthfully claim that anything more than the most superficial study of these natural agencies has been made? It all seems so simple that we pass it over with trite instructions and immature thought as to details in working out the program. Thus most unfortunately the patient gets the impression that the whole scheme of procedure is so simple that the physician is not needed in carrying out the treatment. Taking things into his own hands, the layman fails to properly interpret symptoms and conditions; there is misapplication of physiotherapeutic procedure; and in the end disappointment and disaster result. To illustrate the point more fully: At one time in the course of pulmonary tuberculosis, rest is imperative. Who should know this but the alert and trained physician? If progress towards

cure is made, there must come an end even to rest in a case. Again who shall call the change to exercise but the experienced observer? Then arises the question of the kind of exercise; the frequency, amount, and the correct interpretation of the body reactions to varying grades of mental or physical activity. Thus it becomes evident that things apparently so simple call for the highest intelligence and judgment; the most painstaking and patient observation; and require most untiring and insistent direction. The successful management of a case of pulmonary tuberculosis, from its recognition, through the tedious years to its arrest or cure, constitutes one of the most difficult problems in medical practice. If gratifying results are attained, they are brought about, not so much through drug administration as from the intelligent, patient and painstaking application of physiotherapeutic methods.

The failure of medical education to adequately instruct students upon these important phases of disease management necessarily places a handicap upon hospitals and training schools for nurses. Despite the enormous growth of hospitals in number and structural excellence, improvement in artistic appearances, hotel conveniences, laboratory and surgical equipment, how many institutions have the physical equipment, for example, to make proper application of hydrotherapy? Must the public continue to depend upon Turkish-bath establishments for refreshing and health-giving hydrotherapy? Do not these latter constitute the physician's chief source of instruction upon this subject, rather than the medical schools or hospitals? How many trained or graduate nurses know anything about the therapeutic bath, other than for sanitary purposes; a cold sponge for hyperpyrexia; or a hot pack for grave toxic conditions? Let us not condemn nurses for these shortcomings, but rather confess our own lack of knowledge concerning the value and methods of hydrotherapy.

Nearly akin to the foregoing are those physical manipulations comprehended under the term mechano-therapy. These include massage, Swedish movement, developing and upbuilding exercises as in gymnasiums, correctional movements for orthopedic conditions, re-education exercises as in the ataxia of tabes dorsalis. How many graduate nurses are capable of carrying out these technical procedures? That they do not understand them is unfortunate, but how much greater the reflection on the medical schools and the profession!

Is it not to the discredit of medical colleges that most of our knowledge concerning these matters comes from the gymnasium and athletic field? Is there anyone of intelligence who has the temerity to claim such things have not extreme value? If such there were, has not the World War removed all question from the mind of the doubter? Who has not seen, by scores and by hundreds, lank, stoop-shouldered, anemic or sluggish youths march away to camp, from counters, shops and desks, to return in a few months, erect, stalwart, manly-looking fellows, with brawn in their muscles, courage written upon their faces, and hope gleaming from their eyes? What is the matter with medical education, if the physician is not able, day by day, to accomplish the same results, through somewhat similar agencies?

In protest against the line of argument here offered, the voice of the average physician pleads as follows: "All that you say regarding the failure of medical schools to teach physiotherapeutics, and our ignorance upon these subjects may be true; but have you paused to consider the monetary sacrifice to the physician, which would arise from devoting large time to the carrying out of such measures? People are willing to pay for surgical attention, and for the routine care which involves the administration of medicinal remedies, but they have not been educated to properly evaluate these common natural forces in the management of disease. On our part it means tedious drudgery and poor pay in return." Such is the prevailing obsession which has for long controlled professional conduct. In answer to this line of argument let it be asked if the noted springs and health resorts where hydrotherapy has been emphasized have not yielded a substantial financial return? Some of these institutions have made commendable effort to set upon their methods the stamp of scientific and professional respectability. Besides thorough clinical and laboratory study, a few have made earnest endeavor, in scientific manner, to apply physiotherapeutic methods. The majority, however, are more strictly speaking only hotels and resting places. In some it is often saddening to find a good record, dimmed by the grandiloquent claims of a mineral water. Even such institutions as the foregoing have scarcely kept pace with the public demand for accommodations. The foregoing commercial facts seem to me to controvert the professional fear that hydrotherapeutic methods will not pay.

On turning to manual therapy, as an avenue to lucrative return, is it not true that within the past ten years, quasi-professional men, chiefly of mediocre education and the most brief and superficial training in the fundamental branches of science, have carried manual therapy to a point in public esteem where it receives credence and support from many intelligent laymen? There are five hundred chiropractors in Indiana alone, and two thousand students of

chiropractic in an Iowa college. We cannot ridicule these sects out of existence. We may rail at their brazen pretense, declaim against their ignorance and justly arraign their reckless action in treating serious cases which they know nothing about, but they go merrily on the highway to business success. Is the numerical growth and achievement of osteopathy and chiropractic merely the result of bold advertisement and humbug, or is there back of it all some germ of truth which we have overlooked or refused to see? If so limited a phase of physiotherapy can be made to pay financially by those poorly equipped, how much greater should be the monetary benefits which might be expected if well-trained physicians made scientific study and intelligent application of the broad problem of physiotherapy.

The main purpose of this discussion is to show that the medical profession has failed to measure up to duty in the study and application of the common natural agencies in relation to the cause and cure of disease. We have failed, first because medical schools have not taught these things thoroughly or systematically; because hospitals have not provided the facilities or a staff of teachers thoroughly competent to instruct; and third because nurses have not received efficient instruction in carrying out the methods. Foundations and endowments have been lavish in appropriations of money for the study of pathological and chemical problems relating to disease. But where have large sums been expended in the study of heat, cold, light, air, water, rest, exercise, manipulation, vocation, etc., in relation to disease? Our very neglect to give these subjects the attention they merit in therapy has been more responsible than aught else for the development of recent sects in medicine. If we would, therefore, prevent the tendency to erratic and sensational off-shoots from medicine, let us give no substantial excuse for their origin. Behold the rapidly increasing flood of irregular practitioners, most of them conscienceless pretenders or mercenary commercialists seeking short cuts to the rights and privileges of medical practice. Shall we allow them to possess the domains of legitimate medicine? However venal and commercial may be chiropractic and its kind, let not this fact prejudice us against the germ of truth they may contain. Our duty should be to garner the grain but cast out the chaff—educationally and professionally. Let the medical profession, aroused to full consciousness of duty, reclaim and cultivate with scientific and clinical thoroughness a neglected field—physiotherapy.

Roger S. Morris, Cincinnati (*Jour. A. M. A.*, May 14, 1921), has observed a number of cases in which, following an attack of pneumonia, dullness over the affected lobe became more intense, even flat, with distant or absent breath sounds, not infrequently egophony, and diminished or absent vocal fremitis; often with dullness over the lower dorsal spines and a paravertebral triangle of dullness on the unaffected side. Given such physical signs, exploratory puncture is always indicated. If a syringeful of pus is obtained, the diagnosis is practically certain, and drainage is indicated. It sometimes happens, however, that only a drop or two of pus is obtained, and then interpretation of the finding is more difficult. There have been many instances in which, with a delayed resolution, all the signs of fluid in the pleural cavity have been observed. At times, the signs persist for two or three days, only to disappear for a short time or permanently. Not infrequently the signs of fluid are present one day, absent the next, and reappear the third day. In such cases, exploratory puncture usually fails to reveal pus. Morris has come to the conclusion, as a result of numerous necropsy findings, that all of the evidences of fluid in the pleural cavity may result when, in addition to infiltration of the lung, the bronchi are filled with secretion. This, in effect, is a massive pneumonia, a condition which has long been known to simulate fluid in the pleural cavity.

Julian H. Lewis, Chicago (*Jour. A. M. A.*, May 14, 1921), states that the complement fixation test can be used to detect extremely small amounts of one serum in the presence of larger amounts of another.

The absorption of serum from the subcutaneous tissues is very slow.

The main route of absorption from the subcutaneous tissues is through the lymphatics.

The rate of absorption of horse serum injected subcutaneously is apparently too slow to explain the cases of sudden anaphylactic death which occasionally have followed the administration of antitoxic serums in man.

Certain procedures, such as massage of the site of injection, and the injecting of large volumes under high pressure can hasten the appearance in the circulation of horse serum injected subcutaneously.

Because of the suddenness with which it appears, and because of the analogy to the occurrence of fat emboli after the subcutaneous injection of oily substances, acute anaphylactic death in man following subcutaneous injections of horse serum is probably due to an accidental intravenous injection of the serum.

The need of care, to exclude as far as possible the injury of a subcutaneous blood vessel during subcutaneous injection of horse serum is indicated.

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EDITORIALS

ETHER ANESTHESIA

It is both fortunate and unfortunate that ether is so easy of administration—fortunate in that disasters are rare in inexperienced hands, and unfortunate in that but little effort is expended in perfecting the technique of administration. It is no uncommon thing, even in many of our largest and best hospitals, to see the anesthesia entrusted to the most inexperienced. Most anesthetists have been trained in the school of practical experience alone, without ever having received adequate instruction either in the theory or the application of ether administration. In recent years the anesthetist has been fighting for recognition of his specialty as one worthy of more interest and more respect—to the very marked benefit of anesthesia in general.

A recent paper by Dr. Arthur E. Guedel, of Indianapolis, is being given extended publicity because of its value both for teaching purposes and because it calls attention to the fact that proper administration of ether is an art with innumerable shades of interpretation of the greatest nicety. He calls attention to the necessity for lighter and more even ether anesthesia, remarking that the mere knowledge that the patient is in the third or surgical stage is not now sufficient. He divides third stage anesthesia into four strata and illustrates by a schematic chart the character and significance of the changes in respiration and reflexes during these strata of the third stage. There is nothing particularly new in his discussion of the characteristics of respiration, nor indeed of reflexes save those of the eyeball. Concerning this he says:

"The eyeball offers one of the most important signs in anesthesia today. As long as the eyeball is oscillating or is in an eccentric position though stationary, there is no danger that too much ether has been given. Aside from extraneous circumstances, such as positional asphyxia, hemorrhage, or shock, if the eyeball is moving or is stationary but eccentric, the patient is safe and in good condition.

"As the patient enters the first or upper stratum of the third stage, either from above or below, there is manifest a partial paralysis of the motor oculi muscles. Either there will be an intermittent contraction and relaxation, or variations of these, causing a rhythmical oscillation of the eyeball, or there will be a stronger tonic contraction of one set than of another, resulting in a stationary but eccentric globe. Occasionally in the alcoholic, or the individual of high reflex nervous tension, in place of the above there will occur a peculiar slight twitch of the globe, usually in a lateral direction. This twitch may not occur until from three to five seconds after the lid has been raised for inspection, therefore this inspection should not be momentary. When this twitch does occur, whether late or early, it means the same thing as above, namely, that there is only a partial and not a complete paralysis of the motor oculi muscles.

"Whether there be a rhythmical oscillation, an eccentric stationary globe, or the twitch just mentioned, the meaning is the same; the patient has not had too much anesthetic and, other things being equal, is in an ideal stage of surgical anesthesia."

The chief value of the signs emphasized by Dr. Guedel lies in the fact that they enable one to differentiate between the patient with very quiet and seemingly depressed respiration entering the fourth stage or danger zone, and the patient in the first stratum of the third stage, namely extremely light and ideal anesthesia. It goes without saying that the lighter the anesthesia the better, so long as the surgeon is not hampered by rigidity and troublesome reflexes. All trained anesthetists are familiar in a general way with this first stratum of the third stage described by Dr. Guedel and strive to carry their patient at just this depth. It is fortunate however that so admirable a description of the various characteristics of the different stages has been made so readily accessible. Dr. Guedel also calls attention to the fact that dilation of the pupil with or without morphine is an indication that the anesthesia is too deep.

While it is perfectly true that to give an anesthetic well demands that the anesthetist take note of every available sign, it is still perfectly true that after a large experience it is quite possible to control the patient and keep it in Dr. Guedel's first stratum of the third stage by watching the respiration, color and pulse alone. In the vast majority of instances the trained anesthetist will find it unnecessary to look at the eyeball, and still will have no difficulty in maintaining light surgical anesthesia. On the other hand there are times when all of the available signs must necessarily be taken into account if one is to obtain the desired result.

THE AMERICAN COLLEGE OF SURGEONS CLINICAL CONGRESS—STATE SECTIONS

It is important that the profession and the public also should know about these organizations—what they are, what they are trying to do, and how. To quote from the Year Book of the A. C. S. of the current year—"The American College of Surgeons is a society of surgeons of the United States and of Canada which aims to include within its Fellowship all who are of worthy character and who possess a practical knowledge of the science and art of surgery. The College is fundamentally concerned with matters of character and of training, with the betterment of hospitals and of teaching facilities in medical schools and hospitals, with laws which relate to medical practice and privilege, and with an unselfish protection of the public from incompetent medical service. The College was organized on May 5, 1913, in Washington, D. C., when four hundred and fifty prominent surgeons came together at the invitation of an Organization Committee which had been appointed by the Clinical Congress of Surgeons of North America at its meeting in November, 1912."

Fellowship in the College has since been extended to South American surgeons, the idea being that the membership shall be comprehensively American and include all worthy surgeons of the American Continents. On October 25, 1917, the Clinical Congress of Surgeons was affiliated with the A. C. S. and became the Clinical Congress of the American College of Surgeons.

The annual dues of the Fellows, payable January 1st, are $25.00. Fellows who subscribe $500.00 are exempt from dues. More than a half million dollars already has been raised for the Endowment and the desire is to raise one million as fast as possible.

The College has acquired a beautiful home in Chicago and has been presented with the library of the late Dr. John B. Murphy. To this collection has been added, through the generosity of Mrs. Murphy, the principal surgical works published during the past four years.

Fellowship in the College is open to every person who can furnish evidence that he is professionally and morally qualified to practice surgery. This evidence consists of reports as to the ethical and professional fitness of the applicant furnished by surgeons whose names are submitted by the applicant, and which evidence is attested by three Fellows of the College.

All applicants must sign before admission the following pledge: "Upon my honor as a gentleman, I hereby declare that I will not practice the division of fees, either directly or indirectly, in any manner whatsoever."

The College is organized for surgeons and specialists, and therefore admits only those who limit their practice to surgery or specialize in that branch of practice. In order that the College may avail itself of all competent and conscientious men who are doing good surgery, it is provided that men who are doing general practice in connection with surgery may be admitted to fellowship upon furnishing evidence that they are doing enough surgery to warrant their admission. The percentage of surgery required of applicants varies to suit the particular locality of the individual applicant. An applicant in a city of fifty or a hundred thousand for instance is expected to do a much larger proportion of surgery than the applicant who lives in a city of from three to ten thousand.

Standardization of hospitals is one of the great works inaugurated by the College. The chief purpose of the College is to better the practice of surgery; surgery is an inseparable part of medicine; the hospitals are important factors in all matters of medicine, surgery and public health; therefore, under the title of Hospital Standardization, the College inaugurated an effort to improve hospital service with the aim of safeguarding "the patient against error in diagnosis, against lax or lazy treatment, against unnecessary surgical operations or operations by unskilled surgeons; it aims to bring to every patient, however humble, the highest service known to the profession."

Space and time proscribe details, suffice it to say that this work is progressing rapidly and that already over 400 hospitals have met the minimum standard—seven in Indiana. Among the requirements for the standardization of a hospital are: (1) A staff, which must hold meetings at least once a month and review and criticize the work done in the hospital; (2) No one is allowed to practice in the hospital unless he pledges himslf not to divide fees or give commissions; (3) Complete records of all cases must be kept, and no operations are allowed without the diagnosis or reason for the operation is made and recorded.

The chief object of the Clinical Congress of the American College of Surgeons as originally organized was the betterment of the practice of clinical surgery, and in order that this work might be more effectual the organization of state and provincial branches was inaugurated. Thirty-eight such sectional organizations are now in existence (five in Canada and thirty-three in the United States), and it is intended to prosecute the work until all states and provinces are organized. Meetings of these Sections, like the parent organization, are held annually.

These meetings are occupied by clinics, scientific sessions and public meetings. These public meetings are of special importance, for at these meetings the laity are told by the doctors those things which the public should know in order that it may take the proper interest in all matters pertaining to the prevention and cure of disease, and, on the other hand, prominent lay men tell the profession what the public expects of them as individuals and of the organizations (hospitals, medical schools, etc.) in which they are the responsible actors. In a word these are get-together meetings benefiting both the public and the profession. Indiana held her first Section meeting at Indianapolis May 2nd and 3rd. The scientific meetings and clinics were interesting, instructive and well attended, while the public meeting, which was held in the ball room of the Claypool Hotel, filled that large room with an audience that, judging from the attention manifest, was intensely interested and hence benefited.

The American College of Surgeons is doing a splendid work in a splendid way and all surgeons worthy of the name should be Fellows. The degree of F. A. C. S. will, in the near future, mean to the American surgeon what the degree of F. R. S. means to the British surgeon.

POSTGRADUATE WORK IN INDIANA

Postgraduate courses will be offered during the coming summer by the Indiana University School of Medicine, Indianapolis, in the Departments of Medicine, Surgery, Pharmacology and Pathology.

A course will be given in Internal Medicine, with ward rounds, at the Robert W. Long Hospital, including the methods of medical laboratory diagnosis necessary for the study of patients in the wards. Clinical work in surgical diagnosis will be given; also work in Surgical Pathology. In the former case, whenever indicated at operation, the opportunity will be given to prove or disprove the diagnosis. In the work in Surgical Pathology, special stress will be laid upon gross pathology and upon the relation of the pathological condition to the clinical picture. Also the prognosis as determined by the pathological diagnosis will be discussed.

A course in biochemistry with some of the more recent chemical methods of diagnosis, including analysis of the blood, determination of acidosis, detection of diabetes and hyperthyroidism by the determination of the sugar tolerance and the basal metabolism, will be given. The work will consist of lectures and practical laboratory work.

A course in pathology, covering pathological changes in general, and those changes characteristic of the more common diseases, including various infectious diseases, cardiac, arterial, renal and glandular diseases, anemias, leukemias, neoplasms, etc., will be given. The course will occupy six weeks, with five lectures per week, followed by laboratory periods. Study will be made of the gross and microscopic features of pathological material illustrative of the changes discussed. The projectoscope will be used for demonstrating microscopic changes in the sections to be studied. Those enrolled in this course may attend all autopsy examinations made in the Robert W. Long Hospital and the Indianapolis City Hospital during this period.

A course will be given in disease production and resistance, occupying six weeks, with three lectures and three laboratory periods per week. This course will summarize the present understanding of the mechanism by which various disease manifestations are produced, and the reaction of the body to the various forms of injury. The major portion of the discussions will relate to diseases of bacterial origin, but the pathological physiology of toxemias, mechanical injuries, burns, neoplasms, and diverse other disease processes will be presented. Stress will be laid on the reaction of the body to the various forms of injury, and the relation of this reaction to the course of the disease and to symptomatology. The principles of immunity, and the application of the various serological tests and other immune reactions to diagnosis will be presented, together with the relation of serum and vaccine therapy to the mechanism of the body's resistance.

These courses will be open only to graduates in medicine and will be scheduled so as to make it possible for one or all courses to be taken within the six weeks' period beginning Thursday, June 9th. The ward rounds at the Robert W. Long Hospital will be scheduled during the morning periods on certain days of the week, alternating with laboratory periods in the courses given in the other departments. A certain amount of lecture work will be given in connection with the courses offered. Fees amounting approximately to $25.00 will be charged for each course. This amount includes registration, microscope, laboratory material and breakage fee.

Those desiring to enroll in any one or all of the courses offered should write to the Registrar, Indiana University School of Medicine, Indianapolis, at once indicating their desire for enrollment. It is requested that enrollment be completed by June 8th. Further particulars as to the days and hours at which the work will be given, also any further information desired, will be sent on request.

EDITORIAL NOTES

Now that some of the leading statesmen have announced that Congress is not interested in Einstein's Theory of Relativity and will not pass any laws concerning it, we can sleep soundly at night.

IN so many localities in Indiana there has been a shortage of graduate nurses. We desire to call attention to the fact that we are carrying the advertisement of the Central Registry for Nurses in Chicago, through which graduate nurses may be secured at any time.

THIS year's annual session of the A. M. A. will be held in Boston June 6 to 10, and the Boston medical men have arranged for clinics before and after the session. The clinic feature ought to be a great drawing card, for there is no other place where material and instruction is better.

HAVE you noticed that the patient who has the finest room in the hospital, a trained nurse, often when the latter is not really needed, and exacts the most attention is the one who pays the doctor little or nothing? Of course the doctor is a philanthropist and is ever charitable, but sometimes we are inclined to believe that he is justified in refusing to be made the "goat" for a lot of people who expect to receive but give nothing in return.

FOR several months the chiropractors have been occupying the front advertising pages of our daily newspapers, but now that there is a lull, Christian Scientists are coming back with their publicity campaign. This advertising game is a profitable one for the lay press, and as commercial gain is the desired end of most newspaper editors and proprietors we are not surprised that medical advertising, fraudulent or otherwise, is accepted so eagerly by the average newspaper.

THE lay press has much to say concerning declining prices, but we have noticed no change in most of the articles required in the practice of medicine. Surgical instruments and appliances always were outrageously high, and the exorbitant prices tacked on during the war still stick. There are some surgical specialties for which there is little demand and that only short lived, which perhaps justify fancy prices, but there are many staple articles the prices for which at the present time are absurd.

CONCERNING the growth of medical quackery during the last two or three years, we are inclined to believe that a cause may be found in the air of prosperity that prevailed during and immediately following the war. When everyone has money and it comes easy, wild and foolish expenditures are to be expected. The present financial depression and rather general stagnation of business is producing a marked change in the attitude of most people as pertains to the selection of their medical advisers and the kind of treatment that is to be administered for their ills. With less to pay with and a desire to make the money go farther, people are more particular in the selection of a medical adviser.

PHYSICIANS do more charity work than any other class of people and yet every soliciting committee, trying to get funds for any charitable or benevolent purpose, picks out medical men for those first to be called upon and expresses surprise if not indignation if each doctor solicited does not respond with a donation that would do credit to the richest man in the town. Generally the doctor does respond liberally at considerable sacrifice, and scant credit is given him for his generosity. Except for the fact that it might be considered bad taste to do so, it would not be a bad idea for doctors to keep a record of the amount of charity work they do, and call attention to it when some of the insistent soliciting committees are trying to browbeat the doctor into giving more than he can afford.

AS an evidence of how we can be deceived in our estimate of the value of certain remedies as a direct result of the manufacturer's advertising and extravagant claims, we desire to call attention to what has been said concerning benzyl benzoate in *The Journal of the A. M. A.*, April 30, 1921, an abstract of which appears in this number of THE JOURNAL under the department The Truth About Medicines. Benzyl benzoate no doubt has an anti-spasmodic action, and probably has a sphere of usefulness in certain diseased conditions, but it would seem that the claims for its efficiency in this respect are somewhat extravagant and exaggerated. This is another reason for supporting the work of the Council on Pharmacy and Chemistry which is analytical and unprejudiced, and scientifically trustworthy.

THE University of Virginia has a campaign on to save doctors. The argument is that the title of doctor belongs exclusively to one who practices the medical profession, and should not be used by a man who mixes fizzes or takes rabbits out of a plug hat. Even the musician who plays the cathedral organ or the man who runs a hospital for canaries is not to be called a doctor if the University has its way. In Germany they are apt to call almost any highbrow

a doctor, but they musn't do so in this country any longer. It may be permitted to call the leader of the jazz orchestra a professor, but he is not to be mentioned as a doctor. A doctor is a man who carves the human frame, or writes you a prescription for hotch. He is not one who plays the concertina or does tricks with cards. Little children must remember this.—Exchange.

THIS year's session of the American Medical Association, which will be held in Boston June 6 to 10, should be especially interesting to all members of the medical profession. The last year the Association met in Boston the session was one of the most successful ever held, and there is no reason why the coming session should not prove equally successful. The programs are very promising, and the attendance of quite a large number of confreres from abroad will add to the interest. The expenses of attending the session will be greater than the expenses of attending any previous session of the Association, for the reason that railroad fares and hotel expenses have taken a decided jump, but as doctors for the most part have participated in the general prosperity of the past year or two, probably the increased expense will not prove to be a serious objection.

A REPRESENTATIVE of an eastern manufacturing pharmaceutical house is doing some detail work among physicians in Indiana, and everywhere, when asked concerning the approval of his preparations by the Council on Pharmacy and Chemistry of the A. M. A., he makes the statement that he never has heard of the Council, and doubts if his firm (which is a very old and well established one) knows that there is such a thing. He seems exceedingly interested in the matter, and requests the specific name of the Council, where it is located, etc., making a penciled note of the data. We have every reason to believe that this is a studied attempt to belittle the work of the Council, and probably the agents are inspired by the parent house to assume this attitude. Let no doctor be deceived by such conduct. We believe that any firm attempting such tactics should be given no consideration of any kind whatsoever.

THE Presbyterian Board of Foreign Missions, 156 Fifth Avenue, New York, has sent out a call for a qualified physician for missionary work in China. They desire a Christian physician, not above thirty-five years of age, with a knowledge of psychiatry, or willing to spend a year or two in special preparation for practice among the insane in China. The work already has been established at Canton, China, with a hospital caring for about one hundred patients. The physician does not necessarily need to be a Presbyterian but any Christian physician who measures up to the specifications of the Presbyterian Board, and who has a desire to help a needy people and willing to undertake this special task in China, will be acceptable. This is a splendid opening and presents an unlimited opportunity to some energetic young physician. If interested, write Walter I. Clarke, Publicity Director for the Presbyterian Church, at the above address.

ACCORDING to a recent newspaper clipping "the sum of $500,000 has been given by Drs. Schamber, Kolmer and Raizis to the Dermatological Research Laboratories for the support of medical research." The clipping states further that the amount represents the profits received during the war from the sale of the arsphenamin which was manufactured—first as a wartime necessity and later as a licensed preparation—at the Dermatological Research Laboratories, under the control of these men. When it is recalled that the drug was sold at about one-third the pre-war price of "salvarsan" of German make, and also that the drug was prepared during the economic conditions attendant on the war, the vastly greater toll collected by the German proprietors at the time they controlled the sale of "salvarsan" may be easily calculated. It is indeed to the credit of the American workers that their gains—modest in comparison to those of the Germans—have been dedicated to altruistic purposes.—*Jour. A. M. A.*, March 22, 1921.

SOME of the doctors who regularly attend the annual sessions of the A. M. A. and who as regularly procure their hotel reservations many months in advance, have been rudely shocked as early as January of this year to learn through the Hotel Committee of the American Medical Association that accommodations at the leading Boston hotels are unavailable for the first week of June on account of being sold out. This seems to be a regular condition of affairs since the A. M. A. has taken charge of the hotel reservation arrangements in the various cities where the regular sessions are held. Heretofore it may have been that hotel reservations were scarce a few weeks before the date of the annual session, but there never has been any difficulty in getting assignments several months beforehand. Inasmuch as investigations are the order of the day, perhaps it might be well to know why the Hotel Committee is unable to make hotel reservations six months in advance of an annual session. Can it be possible that reservations are held for the elect?

ACCORDING to a letter written by an Austrian physician, who recently has returned from Russia, and published in the *Vienna Allgemaine Zeitung,* private medical practice has been forbidden in Russia. He says that the final step in the transformation of medical practice into a state function has been taken recently by the soviet government. This prohibits private practice by physicians. This was the last private business still permitted, as arrangements had to be made for free dispensaries at available points. The physicians living near the dispensaries are given charge of them, at a fixed salary. The sanatoriums and private hospitals had been taken early for the purpose, retaining their former proprietors as directors. The writer adds, "The middle classes whose fate in all socialistic movements is to be ground between the millstones of capital and labor, have simply been ground out of existence, or crushed down into the proletariat. The forbidding of private practice now consequently has scarcely any significance for the physicians of Russia."

SOME of the members of our association evidently like to see their names in the public press in connection with cases that have been treated or operated. As an evidence of this we have been furnished clippings in which the name of one prominent doctor is mentioned five times within two days and we are told that the record is little better for several weeks. When any doctor's name appears regularly or even frequently in the daily papers in connection with cases, it is a safe bet that the doctor courts that sort of publicity. There is no excuse for it, and as we often have said before, there isn't a newspaper in Indiana that will not refrain from publishing the name of any doctor in connection with cases if so requested. We suggest that the secretaries of county medical societies keep a scrap book and clip all of these personal notices and insist upon an explanation. Furthermore, it wouldn't be a bad idea if every county medical society in the State passed a resolution conveying a request to the local newspapers to the effect that no doctor's name be published in connection with medical or surgical cases without consent.

AN example of German nerve is narrated in the April issue of *Northwest Medicine* when the editor tells of his desire to subscribe for a couple of German publications, the "Wiener" and the "Berliner Klinische, Wochenschrift," and was advised by an eastern dealer in foreign books not to subscribe for either at the present time. The book dealer stated that the Germans discriminate in prices to all outsiders. For instance, for a periodical costing in Germany 16 marks, publishers have the nerve to ask 850 marks from the American subscriber, this amount to be paid in advance. The excuse for this discrimination is "equalization of exchange" and for this purpose he adds 750 percent to the price of the publication. One incident was given where an American customer was willing to pay this profiteering price, but after the German publisher had received the sum demanded, he sent an additional bill. The customer refused to pay this additional sum, and the thrifty German retained the money already sent him without furnishing a single copy of the publication in question. Such is an example of the German nerve in the disguise of poverty and oppression by the conquerors.

INTRAVENOUS medication is receiving a great deal of advertising, and as a direct result of the exploitation of certain preparations that are extravagantly advertised as especially indicated for intravenous use, many doctors are being led to adopt a procedure that is not only of questionable value but may prove dangerous. Our objection to the intravenous solutions that at present are being advertised so extensively by certain pharmaceutical houses is that the remedies are sold under misleading claims regarding their alleged safety and efficiency. In this connection we desire to condemn the practice of accepting without further proof the statements and conclusions of interested pharmaceutical houses concerning the reliability and efficiency of any of their products. If what they say is true, then they should be quite willing to have their preparations passed upon by the Council on Pharmacy and Chemistry of the American Medical Association. On the other hand, failure to receive the approval from such a source should lead the medical profession to believe that there is something radically wrong with those preparations, and under such conditions the preparations should not be employed until they have received the Council's approval.

WE have had many complaints concerning collecting agencies and wish to warn our readers against placing accounts with any collecting agencies unless unquestioned evidence as to trustworthiness and fairness can be obtained, and we confess that we believe that there are few agencies that can furnish such evidence. The average collection agency, if not fairly close to a fraud, is looking for the major portion of collections made, and often times gets the doctor into such bad repute with debtors that the collection of the account becomes a very costly procedure. A good live office girl with a systematic follow-up system can accomplish wonders for the average doctor in the way of collecting accounts, and what cannot be collected in that way usually can be collected by some

young, active and thoroughly trustworthy attorney in the immediate locality. However, of most importance is the establishment of the habit on the part of the doctor in sending out monthly statements to any and all debtors, and following up with repeated statements in case the account is not paid or some arrangement is made for payment in the early future. Procrastination in presenting bills is what loads up the doctor's ledger with uncollectable accounts.

DOCTORS should be a little shy of collecting agencies if they desire to avoid unpleasant complications. Perhaps the average doctor places nothing but "deadbeat" accounts with collecting agencies, and really doesn't care what happens, or for that matter whether the account is ever collected or not. The possibilities of getting into serious embarrassment should not be overlooked, for not infrequently the collecting agencies take unfair advantage of their position and place the doctor in an embarrassing position through misrepresentation. Not infrequently the doctor is made the victim of an unfair advantage through some such joker as follows:

"In the event the undersigned should withdraw any claims after having assigned the same to said association, the commissions thereon shall be paid to said association the same as if said association had collected such claims in full."

It is all right to protect the collecting agencies from withdrawal of accounts immediately after pressure has been brought to bear upon the debtor which results in payment direct to the doctor, but the doctor is not protected if after a suitable length of time there are no results obtained by the collecting agencies and it is desired to place the accounts in other hands for collection. There is no occasion for making a contract that is one-sided in its protection.

EVERY now and then doctors are visited by representatives of various pharmaceutical houses offering a list of proprietary remedies for which they make extravagant claims, but when asked concerning the acceptance of these proprietaries by the Council on Pharmacy and Chemistry, with a superior air announce that the firm they represent is so old and well established that it is unnecessary for them to submit any of their products for approval. We desire to remind doctors that these "old, established firms" bear watching just as much as the newer ones. No matter how well established a firm may be, experience has shown that each and every one of them have taken advantage of the medical profession at various times and given extravagant and even false information and recommendations concerning some of their products. The Council on Pharmacy and Chemistry is a large body of clinical and laboratory workers, representing the best element in the medical profession, with no commercial or financial ends to be attained. Their recommendations are entirely trustworthy, and should be followed by the medical profession at large. In fact the Council is the only clearing house which enables medical men to know to a certainty what they are using in the way of pharmaceutical specialties, and it is up to Indiana doctors to refuse to accept samples or to recommend in any way drugs or pharmaceuticals which have not had the approval of the Council on Pharmacy and Chemistry.

A FEW weeks ago we heard of a death occurring just preceding a proposed operation under a local anesthetic, the death being attributed to angina pectoris according to the death certificate. No autopsy was held, and the question arises as to whether the reported cause of death was correct or not. On inquiry it was learned that the attending physician, a careful, experienced and competent surgeon, exhibited a hesitancy about investigating the case because the patient had come to him after consulting a rival confrere who made capital of the fatal result. Inasmuch as it is more than probable that not the slightest criticism could be offered as to the conduct of the case, it seems to us that these sudden and inexplainable deaths should be investigated from a scientific standpoint with a view to helping us to avoid similar occurrences. While there are individual idiosyncracies and perhaps rarely an instance where a very limited amount of novocain may prove unusually toxic, yet we must not forget that status lymphaticus, the psychic element, and overlooked pathologic conditions may be directly or indirectly responsible for the death. Only a carefully conducted autopsy would determine these points, and in the interest of scientific advancement we ought to determine the truth. On the other hand, perhaps a certain amount of sympathy should be extended to any doctor who has a sudden death on his hands occurring during some treatment or operation that ordinarily is considered perfectly safe, when we consider the damage that comes from unfair criticism of confreres or the public.

AN interesting hospital agitation has been excited recently in Spokane, Washington, on the part of the drugless healers, according to an editorial in *Northwest Medicine*. It seems that certain members of the medical profession of Spokane started the disturbance by receiving surgical cases from chiropractors and inviting them to be present during the operative procedures.

Thereupon the visitors demanded that they be accorded accommodations in the hospitals for their patients, the same as all other doctors, which privilege was promptly denied them. Of course the drugless healers protested loudly and long through some of the city newspapers, proclaiming the injustice to the suffering public whose unfortunate sick were being deprived of the privilege of receiving drugless salvation in the hospitals of the city. What a farcical situation is here presented! The basis of modern standardization of hospitals is an insistence on scientific knowledge in medical and surgical principles on the part of those who practice in the hospitals. This fact should be widely proclaimed when these half-baked and uneducated drugless practitioners shout from the house tops that they are being discriminated against. There is only one condition to be demanded of all who treat the sick, and that is that all should have an equal scientific education in the accepted basic principles concerning the human body in health and disease. If these facts are continually presented to the public, such outbursts as have recently occurred in Spokane will be estimated at their true value.

THE 72nd annual session of the American Medical Association will be held in Boston from Monday, June 6, to Friday, June 10. The House of Delegates will convene on Monday, June 6. The Scientific Assembly of the Association will open with the General Meeting held on Tuesday, June 7, at 8:30 P. M. The various sections of the Scientific Assembly will meet Wednesday, June 8, at 9:00 A. M. and 2:00 P. M. and subsequently according to their respective programs.

The Sections convening at 9:00 A. M. are as follows:

Practice of Medicine.
Obstetrics, Gynecology and Abdominal Surgery.
Laryngology, Otology and Rhinology.
Pathology and Physiology.
Stomatology.
Nervous and Mental Diseases.
Urology.
Preventive Medicine and Public Health.

The Sections convening at 2:00 P. M. are as follows:

Surgery, General and Abdominal.
Ophthalmology.
Diseases of Children.
Pharmacology and Therapeutics.
Dermatology and Syphilology.
Orthopedic Surgery.
Gastro-Enterology and Proctology.
Miscellaneous.

The officers of the American Medical Association for 1921 are as follows: William C. Braisted, President; Alexander R. Craig, Secretary; Dwight H. Murray, Speaker, House of Delegates.

Now that the Indiana legislature has adjourned we feel free to comment on some phases of the effort to improve medical and public health laws. One of the surprising things was the attitude of some fairly well known medical men in openly opposing bills having the approval of the Legislative Committee of the Indiana State Medical Association. For instance, quite a few members of our Association opposed the bill requiring the registration of all physicians and the payment of a license fee of $2 per year. In practically every instance the opposition was found to be due to the selfish and penurious attitude of a few doctors who put dollars above every other consideration, and who are not willing to put themselves to the slightest inconvenience in upholding a measure that means the improvement of conditions under which medical men practice.

Another peculiar feature that developed in the fight to keep the chiropractors from being recognized as a distinct school of medicine, was the sympathy and the support afforded by a few human skunks who belong to the regular medical profession but who hope to profit through chiropractic influence in seemingly upholding them in their demands for legal recognition. Of course we recognize the need of a good housecleaning in our regular medical profession, and it is a pity that we hold on our membership rolls so many men who are a disgrace to the profession. Just why we tolerate the undesirables is a question that can be answered on no other ground that that as a profession we are weak-kneed when it comes to taking a stand that may prove to be somewhat disagreeable for us.

THERE are probably a few homes in this country in which commercial borax—sodium borate—is not used both for household purposes and as a medicine. It is rather startling, therefore, to hear of a death caused by this ordinarily innocuous substance. In the case reported by Dr. Caryl Potter in a recent issue of *The Journal of the American Medical Association*, death occurred three hours after the patient had taken an ounce of borax. Schwyzer, in 1895, recorded a fatality following the ingestion of one-half ounce. In several other instances, quantities of one-half ounce or more are said to have been taken as an abortifacient, followed, however, by recovery. The symptoms observed in Doctor Potter's case confirm those found in the few cases on record:

gastro-intestinal irritation, manifested by salivation, nausea, vomiting, colic and diarrhœa; collapse, and death. Urinary phenomena are usually prominent (albuminuria, hematuria, casts, vesical spasm). These are not described in the present case, perhaps because the course was too rapid. Delirium, visual changes, and skin eruptions are also of rather common occurrence. The absence of gross necropsy lesions agrees with the usual findings. It indicates that the toxicity depends on systemic action. The symptoms in this case suggest asphyxia by swelling of the bronchial or laryngeal mucosa, an action analogous to the borax urticaria of the skin that has been observed in other cases. This would account for the unusually rapid course. The absence of such edema in other cases may explain the recovery of the patients from equally large doses. Dr. Potter raises an interesting question, i.e., the better instruction of the laity in the possible dangers of substances—used freely in the household—which are on the borderline of poisons. Such substances as borax, boric acid, Epsom salt, lime, washing soda, or even soap, are quite harmless in their respective fields, but become sources of serious danger when they are misapplied. It is doubtful whether such substances should bear a "poison" label. It may be more practical to require a "caution" label bearing a general statement that the substance, when swallowed in excessive amount, is liable to produce serious effects; or, in the case of caustics, that they injure the eyes.

DEATHS

H. L. LAMAR, M.D., Rockport, died April 7, aged 71 years.

J. K. BAXTER, M.D., Sharpsville, died March 27, aged 89 years.

CORA MABEL SLUSS, wife of Dr. John W. Sluss, of Indianapolis, died April 11, aged 51 years.

GEORGE E. SQUIER, M.D., Brookville, Indiana, died February 28, aged 76 years. Dr. Squier graduated from the Eclectic Medical Institute, Cincinnati, in 1882.

CHARLES M. BROWN, M.D., of New Marion, died at the home of his daughter near Titusville, April 6, aged 83 years. Dr. Brown was a graduate of the College of Physicians and Surgeons, Keokuk, Iowa, class of 1879.

JAMES W. DICKERSON, M.D., died April 5, aged 68 years. Dr. Dickerson graduated in medicine from the American Eclectic Medical College at Cincinnati in 1893 and had practiced medicine in Wingate for over 26 years.

CHARLES L. WRIGHT, M.D., of Huntington, died April 2 from an overdose of opium. Dr. Wright was 59 years of age and graduated in medicine from Rush Medical College, Chicago, in 1886. He was a member of the Huntington County Medical Society, Indiana State Medical Association and the American Medical Association.

FREDERICK W. SAUER, M.D., Hammond, died March 23 from pneumonia, aged 32 years. Dr. Sauer graduated from the University of Michigan in 1902. He was local surgeon of the Lake Shore & Michigan Southern and Indiana Harbor Railroads, and was a member of the Lake County Medical Society and the Indiana State Medical Association.

NEWS NOTES

DR. JOHN B. SHIPPLEY, of La Paz, has removed to Andrews for the practice of medicine.

DR. A. C. CHENOWETH of Bluffton was married on April 9 to Mrs. Edith Canter of Pennville.

A NEW children's hospital is to be erected at the Boehne Anti-Tuberculosis Camp near Evansville.

THE 33d annual meeting of the American Pediatric Society will be held at Swampscott, Massachusetts, June 2 to 4.

DR. B. B. THORPE, formerly of Earl Park, more recently of Roann, has returned to Earl Park for the practice of medicine.

THE Massachusetts Anti-Vaccination Bill was killed in the House by a vote of 21 to 100 after having passed the Senate by a vote of 20 to 15.

DR. G. W. CAMPBELL has sold his interest in the medical firm of Campbell & Campbell of Winamac to Drs. C. S. Campbell and T. E. Corneal.

MISS LAURA LOWE, of Indianapolis, has been employed as superintendent of the Bartholomew Hospital at Columbus, succeeding Miss Louise Hiatt.

A RECENT report from Spain states that the physicians of Avila declared a general strike because the authorities refused to increase their salaries.

THE annual convention of the Catholic Hospital Association of the United States and Canada will be held June 21 to 24 at St, Paul, Minnesota.

DR. J. C. FLEMING, of Elkhart, has associated with him in the practice of medicine Dr. H. C. Schlosser, late resident physician of St. Anthony's Hospital, Chicago.

DR. HUBERT WORK, President of the American Medical Association, was given a recess appointment by President Harding on March 28 as First Assistant Postmaster-General.

THE annual conference of the American Hospital Association will be held at West Baden Springs Hotel, West Baden, September 12 to 17. Reservations for 1200 members have been made.

DR. ALFRED HENRY, of Indianapolis, addressed the Sullivan County Medical Society at its regular monthly meeting on April 6, his subject being, "The Diagnosis and Treatment of Tuberculosis".

DR. F. J. BECK, who gave up his practice at Hartsville when he enlisted in military service and who has been practicing in Indianapolis, has returned to Hartsville, purchasing the practice of Dr. E. A. Porter.

DR. J. WILLIAM WRIGHT announces that Dr. Kenneth L. Craft is now associated with him in the practice of rhinology, otology and laryngology, with offices at 610-611 Hume-Mansur Building, Indianapolis.

THE American Association of Anesthetists will meet at the Hotel Bellevue, Boston, June 6 and 7. Among the papers on the science and practice of anesthesia will be a symposium on anesthesia in obstetrics.

SURVEYORS began work on April 12 on the new $100,000 Decatur County Memorial Hospital. This hospital is to be erected by the county as a memorial to the soldiers, sailors and marines of the late war.

THE date of the annual meeting of the American Laryngological, Rhinological and Otological Society, to be held at the Hotel Chelsea, Atlantic City, New Jersey, has been changed from June 1 and 2 to June 3 and 4.

DR. A. C. CHENOWETH, who has been a member of the medical firm of C. E. Caylor and Chenoweth, has severed his connection with the firm and gone to Chicago where he will take up postgraduate work in eye, ear, nose and throat.

SANTA ANA and West Santa Ana, California, recently have suffered a smallpox epidemic. The spread of the disease as reported by the health officer of that city was in a large measure due to the failure of certain chiropractors to recognize the disease.

DR. C. H. ENGLISH of Fort Wayne, Medical Director of the Lincoln National Life Insurance Company, was elected president of the Medical Section of the Life Underwriters at the annual national meeting held recently at Excelsior Springs, Missouri.

AILEEN M. KIME, only daughter of Dr. and Mrs. John T. Kime of Petersburg, died in the Orange General Hospital, Orlando, Florida, April 25. She had been visiting the families of her uncle, Dr. R. R. Kime, and cousin, C. D. Kime, at Orlando.

THE Public Health Nurses' Association of Indiana held a conference at Indianapolis on May 10 to 12 in conjunction with the annual school for health officers conducted by the State Board of Health. Approximately 100 nurses were in attendance.

DR. J. E. HIATT, formerly of the Newcastle Clinic, Newcastle, Indiana, was the guest of honor at a banquet given by the physicians of Newcastle on March 31. Dr. Hiatt has located at San Antonio, Texas, where he will continue to practice medicine.

RADIUM valued at $13,000 was thrown away by a woman patient in the Faxton Hospital, Utica, New York, who did not appreciate its value. The radium was the property of Dr. George M. Fisher and was being used to treat a cancer of the woman's breast.

THE *American Journal of Tropical Medicine* is the name of a new medical journal to be published bi-monthly by the American Society of Tropical Medicine. H. J. Nichols, Medical Corps, U. S. Army, Army Medical School, Washington, D. C., is the editor.

AT the annual meeting of the Third District Medical Society held at New Albany on April 8, the following officers were elected for the ensuing year: President, Dr. A. L. Mitchell, Salem; Secretary, Dr. Claud Paynter, Salem; Councillor, Dr. W. J. Leach, of New Albany.

PROFESSOR GUSTAVE KILLIAN of Berlin died February 24 after a prolonged illness. Professor Killian was a leader in the field of laryngology, being the first man to make direct examinations of the larynx, trachea, and bronchi by means of specially devised instruments of his own invention.

SEVENTEEN nurses of the Lutheran Hospital Training School for Nurses, Fort Wayne, received their diplomas at the annual commencement exercises held May 6 at St. Paul's auditorium, Fort Wayne. Dr. Garrett Van Swearingen of Fort Wayne and Rev. Eggers of Seymour, Indiana, were the principal speakers.

THE Medical Research Laboratories at Mitchell Field, Mineola, Long Island, were destroyed by fire on March 19. One of the most complete and valuable x-ray equipments in the country including apparatus for testing the heart and lung action in various atmospheric densities, and many war aviation records, were totally destroyed.

DR. ADA MCMAHON, of Lafayette, has been appointed by Governor McCray as the first woman member of the Indiana State Board of Health. Dr. McMahon succeeds Dr. Frederick Henshaw of Indianapolis, whose term expired March 1, 1921. Dr. Hugh A. Cowing of Muncie, whose term expired April 14, was reappointed.

THE United States Public Health Service will ask Congress at its special session for $200,000 to improve and equip the quarantine station at New York City. The in-rush of immigrants to the United States during the past year has made the facilities for examining and fumigating persons passing through this station wholly inadequate and much delay has been experienced in handling immigrants.

DR. FRED E. JACKSON, who for the past ten years has been connected with the City Dispensary at Indianapolis, left April 23 for England where he will spend the summer in hospital work and postgraduate study. He plans to specialize in children's diseases and diseases of the chest, pursuing his studies at the Great Ormond State Hospital for Sick Children and the Brompton Chest Hospital, London.

MIGRATION of the country physician to the city has stripped many rural parts of the Eastern and Middle West states of medical men. A bill was recently presented before the Massachusetts Legislature to permit any town which has no doctor to appropriate money to induce a physician to establish himself in the community. Several towns have voted to guarantee a $5,000 income to obtain a physician.

A NEW modern Maternity Department has been added to the St. Edward's Hospital at New Albany. This addition was erected at a cost of $30,000, and contains twelve rooms with private baths, and all of the most up-to-date equipment required for obstetrical work. The institution now has a capacity of 130 to 140 beds, and recently the entire hospital has been renovated and redecorated. A formal opening was held on April 26.

A UNIFORM fee bill was adopted by the Howard County Medical Society at its meeting of April 1. The fee bill is as follows: Office consultation (minimum), $1. An extra charge will be made for medicine dispensed. Office examination (minimum), $2 to $5. Day visit (minimum), $2.50. Night calls (7 P. M. to 7 A. M), $3. Calls outside city, each additional mile, $.50. Consultation $10. Confinement (minimum), $25. Anesthetics (general), $10.

THE Southern Health Laboratory Association was organized at Atlanta, Georgia, on March 16 for the purpose of securing uniformity of methods and procedures among the public health laboratories of the Southern States. Representatives of health departments in seven southern states were present at the organization meeting and officers were elected as follows: President, Dr. Clarence A. Shore, Raleigh, North Carolina, and Secretary, Mr. T. F. Sellers, Atlanta.

DR. WILLIAM IRONSIDE BRUCE, physician to the Roentgen-Ray and electrical departments of the Charing Cross Hospital, London, England, died recently after an illness of two months from a severe form of aplastic anemia. This form of anemia, it is said, is due to the injurious effect on the blood forming tissues from the more penetrating rays derived from the Roentgen-Ray tube or from radium. Doctor Bruce, therefore, is another martyr to the Roentgen-Rays.

THE Medical Department of Columbia University announces a course in cancer research during the summer session to be held at the Crocker Laboratory, 1145 Amsterdam Avenue, New York, under the direction of Professor W. H. Woglom. The presenting of this course

has been stimulated by the approaching visit of Mme. Curie and by the progress in experimentation reported by Dr. Francis Carter Wood, Director of the Crocker Laboratory. The course will deal with the morphology and biology of tumors.

Modern Medicine, a monthly magazine of medical and health progress for physicians and for others interested in administrative industrial and social health problems, in its third year of publication under the editorship of Drs. Alexander Lambert, S. S. Goldwater, and John A. Lapp, at Chicago, Illinois, is to change its name with the May issue to *The Nation's Health.* The change is being made in order to make the title more clearly descriptive of the present scope and new and greatly enlarged service of the magazine in health promotion and conservation.

THE Victor X-Ray Corporation announces that beginning April 1 a new arrangement went into effect governing the distribution of factory products, and service in connection therewith, in the State of Indiana. Mr. M. C. Olson has been made territorial sales distributor, with headquarters at 917 Fletcher Savings & Trust Building, Indianapolis, and assisting him is a corps of competent men, factory representatives who have had thorough and practical training in the factory and who are efficient in giving service quickly and intelligently to users of Victor x-ray and physical therapy apparatus.

DURING April the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Armour & Co.:
  Suprarenalin Solution—Armour.
The Diarsenol Co.:
  Silver Diarsenol.
  Silver Diarsenol 0.05 Gm. Ampules.
  Silver Diarsenol 0.1 Gm. Ampules.
  Silver Diarsenol 0.15 Gm. Ampules.
  Silver Diarsenol 0.2 Gm. Ampules.
  Silver Diarsenol 0.25 Gm. Ampules.
Hynson, Westcott & Dunning:
  Mercurochrome—220—Soluble.

THE annual meeting of the Ninth Councillor District of the Indiana State Medical Association was held Thursday, May 12, at Lafayette, under the direction of Dr. William R. Moffitt, Councillor; Dr. J. W. Hadley, President, and Dr. C. B. Kern, Secretary. The following scientific program was carried out: Address of Welcome by Mayor George R. Durgan; "Puerperal Infections and Their Present Methods of Treatment," Dr. W. H. Williams, Lebanon; "Diagnosis and Treatment of Surgical Lesions of the Abdomen," Dr. Allen B. Kanavel, Chicago; Discussion of Above Paper, Dr. Charles Elliott, Chicago; "The Clinical Diagnosis of Incipient Tuberculosis of the Lungs," Dr. Fred Tucker, Noblesville. A banquet at the Hotel Lahr at 6:30 followed the scientific meeting.

IN view of the fact that 650 physicians, nurses, social workers and clinicians attended the Institute on Venereal Disease Control and Social Hygiene, held recently by the Public Health Service, thus indicating the desire for more training along this line, the Service proposes to conduct a general Public Health Institute to take place during the Fall of 1921. The Institute is to consist of from 25 to 30 courses, including diagnosis and treatment of tuberculosis, nutrition in health and disease, sanitary engineering, clinical nursing and social work, clinical management, courses in syphilis and gonorrhea, mental hygiene, industrial hygiene, child hygiene, vital statistics, laboratory diagnosis, health centers and various courses in psychology and sociology. The Institute faculty will be composed of 75 to 100 leading authorities, including William H. Welch, William H. Park, John A. Fordyce, Valeria H. Parker, John H. Stokes, M. H. Rosenau, Michael M. Davis, Jr., William A. White, Anna Garlin Spencer, Irving Fisher, C. V. Chapin.

SINCE 1917 at the request of the French Government, the American Committee for Devastated France, Inc., has administered emergency relief in 200 villages and hamlets in the district of the Aisne. In these villages, which were first systematically destroyed by the Germans and subsequently fought over, aid has been given to the returning inhabitants who have been provided with the necessities of life, with live stock, farming utensils and seed. A hospital with public clinics in various localities, schools and workshops also have been established; and above all, the much needed moral support has been given. The work, carried on by 125 self-supporting volunteers, is now roughly divided into two departments, Public Health and Agriculture, and is carried on under the financial control of the Banque de France, which reports the overhead expense at the low figure of only 8 percent. M. Tardieu, the honorable president, has appealed to this committee to continue its activities, as he feels that the departure now would do much harm. The work of this committee is fully endorsed by a large number of the leading physicians and surgeons of America, who also are urging its continuance.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	85
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	23
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	26
15.	Washington	Irvin Huckleberry	5	13
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19

JOHNSON COUNTY

The Johnson County Medical Society met in regular session on March 13, at Whiteland. Due to the resignation of Dr. L. K. Phipps as president, Dr. J. N. Record was elected to fill the vacancy, and Dr. J. V. Baker was elected vice-president in Doctor Record's place.

The society took a decided stand against chiropractic deception, and voted to ask the American Medical Association to formulate such plans as will combat the rapid spread of the deception.

Dr. L. L. Whitesides of Franklin, an active member of the society, is very ill from influenza, having been out of his office since the summer of 1920. However, his case is reported hopeful.

Adjourned.

LUKE P. V. WILLIAMS, Secretary.

TIPTON COUNTY

At a meeting of the Tipton County Medical Society on March 15 the following resolution was passed:

"Inasmuch as the bill for re-registration was defeated by our last legislature,

"RESOLVED—That our State Medical Society dues be increased to an amount so that a reserve fund may be created, sufficient in quantity and for the purpose of fighting all illegal practice of the healing art. Said fund to be placed in the hands of the Board of Medical Registration and Examination."

The Tipton County Medical Society feels that this proposition ought to be considered (or some other way, if better) so that this fund may be raised.

L. M. REAGAN, Secretary.

UNION COUNTY

The April meeting of the Union County Medical Society was held at the Hotel Corrington, Liberty, in the form of a six o'clock dinner, with every member present. Following the dinner, there was a round table discussion of interesting cases and unique situations confronting the country doctor.

The Union County Medical Society reports a 100 percent attendance at practically every monthly meeting, and an unusual spirit of cordiality and friendship among the members.

The members of the local society were hosts to the Union District Medical Society at their annual meeting on April 28. More than a hundred physicians from eastern Indiana and western Ohio were present. Dr. O. E. Muns of Oxford, Ohio, is president, and Dr. E. E. Holland of Richmond, secretary.

E. R. BEARD, Secretary.

TIPPECANOE COUNTY

Pursuant to a motion adopted at the last meeting, this Society invited the public to an open meeting held at the Central Y. M. C. A. on February 22, to discuss the local milk situation. About two hundred interested citizens, representing the producers, the distributors, and the consumers, were present.

The meeting was presided over by Secretary Reser, who stated the object of the meeting and introduced the first speaker of the evening, Dr. R. A. Craig of Purdue, who showed stereopticon views of tubercular cattle; following this by views of dairy barns—first a view of a modern, model dairy barn, and in contrast pictures of objectionable dairy barns, a type that could be easily found a few years ago.

The second speaker was Mr. Stainsby, an inspector under the supervision of the State Board of Health, who had been reported to the Society as having found very objectionable milk conditions existing in Lafayette at the time of his inspection in December, 1920. However, when called upon at this meeting he gave a clean bill to every distributor, and lauded the principle of pasteurization, this report being absolutely contradictory to his report of last December.

Dr. Roy Walker, city milk inspector, reported that frequent tests of milk on sale in the city had been made at Purdue, and as far as chemical analysis could determine, the milk was practically within the law. This report was based on inspection of the only three independent dairies who were delivering their products in this city, which, according to his statement, were the only dairies he was expected to inspect.

Dr. H. E. Haskins, representing the U. S. Department of Agriculture, spoke concerning the known possibility of bovine tuberculosis being capable of transmission to human beings, and strongly advocated the treatment of all cattle with tuberculin.

Prof. C. R. George of the dairy extension department of Purdue University said the local milk situation was in many respects the same as in many other cities. He said that Lafayette should have better milk, and more of it, but that the price to the producer was inadequate to encourage production.

Mrs. S. C. Marks, representing the Parent-Teachers' Association, said they would like to introduce milk lunches in the schools, but that the local product was unsatisfactory.

C. Haven Smalley, a producer, said that competent inspection of the source of production was most essential, and that all raw milk sold in the city should be from tuberculin tested cows. He presented figures showing that of the 14 cents paid by the consumer in Lafayette, but 3.8 cents goes to the producer—the farmer.

City officials reported that they had heard rumors to the effect that reconstructed milk was being sold in Lafayette, but never had been able to substantiate same. However, they stood ready to do anything possible to remedy the situation if any definite information was given them to work upon.

Dr. R. H. Carr, chemist of Purdue University, reported that it was possible to make from milk powder, milk that could not be detected, chemically or otherwise, from genuine raw milk; thus emphasizing the necessity of proper inspection of dairies, etc.

Motion was made that a committee of six be appointed, consisting of two producers, two distributors, and two consumers, to investigate and suggest a way to remedy the difficulty.

Adjourned. W. M. RESER, Secretary.

March 22, 1921

Regular meeting called to order after luncheon by President McClelland. Minutes of two previous meetings read and approved without change.

A communication from the Tippecanoe County Tuberculosis Association asking for endorsement of the association's campaign against the "white plague" was read, and Doctor Campbell made a motion to adopt the following resolution: "Be it resolved by the Tippecanoe County Medical Society that we heartily endorse the sale of seals and expenditure of the money thus obtained by the Tippecanoe County Tuberculosis Association. We further pledge our support and aid in all the efforts of said association in the survey to be made in the near future." This motion was seconded by Doctor Reser and unanimously carried.

Another communication from Secretary Ebel of the Tippecanoe County Tuberculosis Association was read announcing that this Society had been elected to membership on the Board, with Doctor Reser elected to represent the Society on the Board for the ensuing year.

The application of Dr. G. R. Clayton by card from the Benton County Medical Society was read. Doctor Reser moved that the application be received and the name of Doctor Clayton be spread upon the roster. This was seconded and carried.

Doctor Moffitt read a very practical and entertaining paper on "Septicemia in Abortion".

Abstract:—All cases reported were criminal or self induced. The younger local members of the profession of today are not guilty. The local abortionists are not so active as was the case 25 or 30 years ago. Many of our modern day women have no scruples, not even religious, against abortion so that "many babies have to run the gauntlet before they get into the world".

Two methods of treatment of septicemia following abortion:

1. Active: Remove debris at once.
2. Expectant: Let uterus alone until five days after being free from fever unless severe hemorrhage. Nonseptic cases curetted as routine.

Results more favorable in septic cases under expectant treatment. Personal experience, woman will always tell who committed the criminal act when she thinks she is going to die.

Case Reports:—No. 1. 25 years ago Mrs. D. when first seen, temperature high. Delirious. Self induced with rat tail file. Lived one week. Case No. 2 (20 years ago). Girl, age 18 years. First seen temperature 104.5. Hemorrhage. Removed placental tissue. Septic 5 or 6 weeks. Called it typhoid fever. Recovered. Case No. 3 (15 years ago). Mrs. G. Septic when called. Temperature moderate. pulse rapid. Three weeks later paralyzed and died. Case No. 4 (12 years ago). Strong woman, age 30. Pregnant four months. Temperature high, pulse rapid. Discharge very fetid. Induced by doctor of near-by town. Removed placental tissue, swabbed with iodine and alcohol. Temperature up to 106, pulse 150, died in one week's time. Case No. 5. Widow, five months pregnant. Cervix rigid. Intense pains. Induced by doctor. Head of fœtus punched full of holes. Recovered. Case No. 6. Girl, age 18. Metritis, having aborted some time previously. Resulted in convulsions which continued for two or three years, when she died. Case No. 7. Girl. Had a chill before called me. Fever high. Removed placenta. Recovered. Case No. 8. Mrs. H. Widow with children from first husband. Married second husband, who left her in pregnant state. Wanted abortion induced; refused and warned of danger. Went to abortionist. Died, leaving her children. Case No. 9. Girl (colored), age 20 years. Wanted abortion induced; refused. Went to abortionist. Died. Case No. 10. Widow. When first seen temperature 105, pulse 120. Had used medicine. Curetted. Recovered. Case No. 11. Mrs. B, age 40 years. Weight 150 pounds. Worst case ever had. Self induced with male catheter. Having some hemorrhage. Gave ergot and tamponed. Cervix still rigid. Refused curettage. Week later bleeding again; again refused to go to hospital. Later said she was all right. Week later was called again. Temperature 105, pulse 140. Chills. Wouldn't consent to do anything. Finally went to hospital. Curetted and removed particles of placental tissue. Temperature still remained up, and chills. Used stock antistreptococcic serum. Later autogenous serum. Gave quinine and whiskey heroically. Chills every day. Temperature still high, pulse still rapid. Sweating. Left leg become greatly swollen. Abscess developed under knee. Died Dec. 29, 1920.

Discussion:—DOCTOR CAMPBELL. Several years ago was called to country to see a girl who was in pain. Removed a catheter. Three days later a fœtus was delivered. Within a short time six others in the same neighborhood aborted. Seem to go in waves until someone slips over the great divide, then it ceases until they get over their scare.

Doctor Moffitt's paper was gleaned from a practice of about a half century. If his case reports could be printed and handed out by the doctor when he is solicited for a criminal act it surely would cause the ordinary woman to think twice before she went to another doctor for the same purpose.

At this time Doctor Kerr announced that he would have some motion pictures shown, depicting the diagnosis and treatment of gonorrhea and syphilis. These pictures were produced and sent out by the United States Public Health Service and the State Board of Health. This gave a very instructive entertainment for about one hour.

Adjourned. Members present 19, visitors 2.

W. M. RESER, Secretary.

INDIANA SECTION, AMERICAN COLLEGE OF SURGEONS

The first annual meeting of the Indiana Section, Clinical Congress of the American College of Surgeons, was held at the Claypool Hotel, Indianapolis, Monday and Tuesday, May 2 and 3, under the direction of Dr. Miles F. Porter, Fort Wayne, Chairman; Dr. Edmund D. Clark, Indianapolis, Secretary; and Dr. James Y. Welborn, Evansville, Counselor. Members of the Committee on Arrangements were Dr. J. Rilus Eastman, Indianapolis, Chairman; Dr. W. N. Wishard, Dr. John P. Oliver, Dr. Lafayette Page, Dr. O. G. Pfaff. Registration, 87.

General and special surgical clinics and demonstrations were held from 9:00 a. m. to 12 m. on Monday and Tuesday, at the City, Methodist and St. Vincent's Hospitals. These clinics were of unusual interest, and were well attended.

At 2:30 p. m. on Monday was held the Hospital Conference, presided over by the Chairman of the Indiana Section, Dr. Miles F. Porter.

The following subjects were discussed:

The Hospital Program of the American College of Surgeons and the Meaning of the Minimum Standard, by Harold M. Stephens, Director of Hospital Activities, American College of Surgeons.

The Work of the Hospital Surveyor, by Jas. L. Smith, M.D., Hospital Survey Department, American College of Surgeons.

Experience with the Standardization of Program of the American College of Surgeons from the Surgeon's Standpoint, Richard B. Wetherill, M.D., Lafayette.

Experience with the Standardized Program of the American College of Surgeons from the Hospital Superintendent's Standpoint, H. L. Foreman, M.D., Superintendent Indianapolis City Hospital.

The meeting on Monday evening was open to the public, and the large attendance of laymen indicated their keen interest in the aims and objects of these meetings, which are to give to the public better surgical service and better hospital service.

The program of the evening was of unusual excellence, and apparently was thoroughly appreciated by laymen as well as medical men. Following is the program:

Address of Welcome, Dr. H. G. Morgan, Indianapolis.

The American College of Surgeons, Dr. Franklin H. Martin, Chicago, Secretary-General of the American College of Surgeons.

The Surgeon and the Community, Dr. Wm. D. Haggard, Professor of Surgery, Vanderbilt University, Nashville, Tennessee.

The Early Recognition of Cancer, and Its Importance, Dr. Carl A. Hamann, Professor of Clinical Surgeons, Western Reserve University, Cleveland, Ohio.

What the Public Should Know About Cancer, Dr. Joseph C. Bloodgood, Associate Professor of Clinical Surgery, Johns Hopkins University, Baltimore, Maryland.

The Standardization of Hospitals, Judge Harold M. Stephens, Director of Hospital Activities, American College of Surgeons.

On Tuesday afternoon, Dr. Franklin H. Martin again spoke on Organization for Better Surgery; Dr. Wm. D. Haggard discussed the Present Status of the Cancer Problem; and Dr. C. A. Hamann read a paper on the Clinical Resemblance Between Inflammatory Processes and Neoplasm.

The annual business meeting of the Section was held Tuesday afternoon, preceding the scientific session. Evansville was selected as the next place of meeting, 1922, and the following officers for the ensuing year were elected: Chairman, James Y. Welborn, Evansville; secretary, Eldridge M. Shanklin, Hammond; counselor, Henry O. Bruggeman, Fort Wayne.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

ARSPHENAMINE-SQUIBB.—A brand of arsphenamine N. N. R. (see New and Nonofficial Remedies 1921, p. 41). Arsphenamine-Squibb is marketed in ampules containing, respectively, 0.1 Gm., 0.2 Gm., 0.3 Gm., 0.4 Gm., 0.5 Gm., 0.6 Gm. Arsphenamine. E. R. Squibb & Sons, New York.

NEOARSPHENAMINE-SQUIBB.—A brand of neoarsphenmine N. N. R. (see New and Nonofficial Remedies 1921, p. 45). Neoarsphenamine-Squibb is marketed in ampules containing, respectively, 0.15 Gm., 0.3 Gm., 0.45 Gm., 0.6 Gm., 0.75 Gm., 0.9 Gm. Neoarsphenamine.

SODIUM ARSPHENAMINE-SQUIBB.—A brand of sodium arsphenamine N. N. R. (see New and Nonofficial Remedies 1921, p. 48). Sodium arsphenamine-Squibb is marketed in ampules containing, respectively, 0.15 Gm., 0.3 Gm., 0.45 Gm., 0.6 Gm., 0.75 Gm., 0.9 Gm. sodium arsphenamine. E. R. Squibb & Sons, New York. (*Jour. A. M. A.*, April 9, p. 1007).

PROPAGANDA FOR REFORM

DIGIFOLIN NOT ADMITTED TO N. N. R.—Digifolin-Ciba is a product of the Society of Chemical Industry of Basle, Switzerland. It is claimed to be "a preparation of digitalis leaves, that has been freed from their useless and harmful principles such as digitonin (saponin), coloring and inert matter, etc., but does contain all the really valuable and therapeutically active constituents of the leaves, namely, digitoxin and digitalein, in their natural proportions. The Council on Pharmacy and Chemistry reports that there is no evidence that digifolin contains all of the glucosides of digitalis as they exist in the leaf and that it is extremely improbable that this is the case, because one cannot remove the saponin without altering the other active principles of digitalis. The Council also held unwarranted the claim that Digifolin does not have the disadvantages of galenical digitalis preparations since it is well established that the untoward effects of digitalis are inherent in the principles that exert the desired effects of digitalis and that these may be avoided largely by a carefully regulated dose of any digitalis preparation. The claim that Digifolin-Ciba has all the advantages and none of the disadvantages of digitalis has been refuted so frequently that manufacturers must be aware that it is untenable. Further, the report concludes, the claims now made for Digifolin are essentially those made nearly four years ago, at which time the attention of the American agent was called to their unwarranted character (*Jour. A. M. A.*, April 2, 1921, p. 952).

HEXAMETHYLENAMIN AND SODIUM ACID PHOSPHATE.—Hexamethylenamin acts in acid urine only. Hence, if the urine is not acid, sodium acid phosphate should be given in doses of 1 to 2 gm. midway between the doses of hexamethylenamin. Enough of the sodium acid phosphate should be given to render the urine acid, but not enough to cause diarrhea (*Jour. A. M. A.*, April 9, 1921, p. 1031).

LASH'S BITTERS.—A physician reports that he was called to see a patient who had consumed ninety-one bottles of Lash's Bitters in thirty-six days. Previously the patient had consumed Wine of Pepsin in about the same amount. The amount of Lash's Bitters consumed is equivalent to about twenty ounces of straight whisky daily. The label on the Lash's Bitters bottle declares "Guaranteed free from habit-forming or injurious drugs" (*Jour. A. M. A.*, April 9, 1921, p. 1029).

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, on the ground that the therapeutic claims made for them were false and fraudulent: Treatamiento Zendejas (Panfilo Zendejas), a solution containing potassium iodid, plant extractives and sugar. Helmitol (Bayer Co., Inc.), tablets consisting of hexamethylenamin, methylencitrate and talc. Self-help E. and I. Treatment (Henry S. Wampole Co.) consisting of a liquid which was essentially zinc chlorid and glycerin and tablets containing cubebs, copaiba balsam with small amounts of santal oil, alum and magnesium oxid. Uriseptic Pills (G. J. Fajardo), consisting essentially of hexamethylenamin, cubebs, santal oil and kava kava. Pinkolo Ointment (Custer Chemical Co.), an ointment containing camphor, red mercuric oxid and zinc oxid (*Jour. A. M. A.*, April 9, 1921, p. 1029).

COD LIVER OIL IN RICKETS.—For many years cod liver oil has been regarded almost as a specific against rickets in children. During recent years it has been made reasonably certain that the administration of cod liver oil alters the calcium balance in such a manner that calcium will be retained in the body and that it increases the capacity of rachitic children to take up and hold calcium. Since the beneficial effects of cod liver oil on rickets may be due to its liberal content of vitamine A, frequently described as the Fat-Soluble food accessory, it is interesting to know that crude unrefined cod liver oil may be 250 times as rich as butter in vitamine A and that samples of refined oil, although not so active as the crude oil, were also far superior to butter in their vitamine potency. The ease with which the Fat-Soluble A

Vitamine of cod liver oil is destroyed by reagents and drastic manipulations make the various "refinements" of cod liver oil products sold as proprietary preparations even more reprehensible than they have seemed in the past.—(*Jour. A. M. A.*, April 9, 1921, p. 1009).

SOME OF LOESER'S INTRAVENOUS SOLUTIONS.—The Council on Pharmacy and Chemistry reports that Loeser's Intravenous Solutions of Hexamethylenamin, Loeser's Intravenous Solution of Hexamethylenamin and Sodium Iodid, Loeser's Intravenous Solution of Sodium Salicylate, Loeser's Intravenous Solution of Salicylate and Iodid, Loeser's Intravenous Solution of Sodium Iodid and Loeser's Intravenous Solution of Mercury Bichlorid, manufactured by the New York Intravenous Laboratory, were not accepted for New and Nonofficial Remedies because they are sold under misleading claims regarding their alleged safety and efficiency. The fundamental objection to the claims made for these preparations is the general claim of superiority and safety of the intravenous method. The Council continues to hold that intravenous medication generally is not as safe as oral medication, even with relatively harmless substances and that it does not give "improved clinical results" except under rather narrowly confined circumstances, namely, if the drug undergoes decomposition in the alimentary tract, if it is not absorbed, if it causes serious direct local reactions, or if time is an urgent element. The Council has recognized intravenous preparations which satisfy these requirements. The Council concluded that these solutions did not meet these conditions.—(*Jour. A. M. A.*, April 16, 1921, p. 1120).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities, chiefly because the therapeutic claims advanced for them were held false and fraudulent: Methylax Blue Pearls (Pfeiffer Chemical Co.), capsules containing cubebs, methylene blue and probably copaiba and kava kava. Jax Capsules and Antiseptic Injection (The Tropical Cooperative Co.), the capsules containing cubebs, balsam of copaiba and corn starch while the injection was reported to consist of a solution containing phenol, thymol, methol, boric acid and zinc sulphate. Stops It in One Day (O. K. Remedy Co.), consisting of two preparations, a bottle containing a dilute solution of berberin sulphate, and a tube containing a mixture of potassium permanganate and potassium sulphate. Purola Kidney and Liver Remedy, Diarrhea Mixture, Femalin, Sarsaparilla Compound and Compound Extract of Buchu (The Blumauer-Frank Drug Co.), the first, a solution containing vegetable extractives carrying emodin and resin, potassium acetate, sugars and a trace of salicylic acid; the second, a solution of opium, camphor, capsicum extractives, rhubarb, oils of peppermint and anise and a trace of gambir; the third, a solution containing glycyrrhiza extractives, emodin, resin, a trace of alkaloid, sugar, glycerin and aromatics; the fourth, a solution of vegetable extractives carrying emodin, indications of saponin, glycyrrhizin, alkaloids, volatile oils, sugar, glucose and potassium iodid; the fifth, a solution of buchu extractives, sugar licorice and extractives, potassium acetate and little, if any emodin. Planter's Golden Crown Special (Planter Medicine Co.), consisting essentially of oil of cassia, methyl salicylate, copaiba, alkaloids of sanguinaria, ethyl nitrite, water and alcohol.—(*Jour. A. M. A.*, April 23, 1921, p. 1185).

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the therapeutic claims were held to be false and fraudulent: Antibrule (Crescent Chemical Co.), essentially a watery solution of picric acid and a small quantity of picrates. Burkhart's Vegetable Compound (Dr. W. S. Burkhart), consisting essentially of aloes, capsicum, and plant extractives including resins, probably podophyllum. S. O. S. (Pfeiffer Manufacturing Co.), consisting of two preparations; one, a watery solution containing thymol, zinc, magnesium sulphates and glycerin; the other, pearls containing santal oil, copaiba balsam, oil of cinnamon and fixed oil. Osgood's Special Capsules (H. Planten & Son), consisting of volatile gurjun oil, a phenolic compound and a sulphurated fixed oil. Gin-berry Capsules (Henry S. Wampole Co.), composed essentially of cubebs, balsam of copaiba, santal oil, magnesia and alum. Benetol Vaginal Suppositories (Benetol Co.), consisting essentially of alpha and beta naphthol, boric acid and traces of menthol and phenol in a cacao butter base. Mowery's Gonorrhea Paste (Binkley Medicine Co.), essentially powdered cubebs, copaiba balsam, alum and magnesia.—(*Jour. A. M. A.*, April 30, 1921, p. 1263).

ALUMINUM POTASSIUM NITRATE.—The product advocated in the July 17, 1920, issue of the *Chicago Medical Bulletin* for the treatment of osteomyelitis is not on the market. The product, which is said to be used, has been analyzed for the Council on Pharmacy and Chemistry in the Association's Chemical Laboratory. Analysis showed that it did not have the composition claimed. For practical purposes the preparation may be regarded as a mixture of 97.5 percent potassium nitrate U. S. P. (saltpetre) and 2.5 percent of aluminum nitrate (which may be purchased from chemical supply houses).—*Jour. A. M. A.*, April 30, 1921, p. 1265).

BENZYL BENZOATE.—This drug has been widely accepted, chiefly on the basis of experiments on excised organs as an efficient antispasmodic agent for smooth muscle in various regions. Few observations have been made, however, as to its action on intact organs. Recent investigation has raised serious doubt as to the efficiency of benzyl benzoate as an antispasmodic for the intact uterus, intestines, stomach and bronchi. Large doses injected into dogs intravenously (so that the drug might act on the smooth muscles of these organs) gave almost totally negative results. This investigation suggests that allowances should be made for impressions, reflex influences, the psychic state and natural recovery before drawing definite conclusions as to the beneficial effect of benzyl benzoate, especially in such capricious conditions as hiccup, whooping cough, asthma and dysmennorrhea for which it has been advocated.—(*Jour. A. M. A.*, April 30, 1921, p. 1252).

BOOK REVIEWS

AMERICAN RED CROSS WORK AMONG THE FRENCH PEOPLE—By Fisher Ames, Jr. 178 pages. The MacMillan Company, New York, 1921. Cloth, $2.

The title of this book indicates the scope covered in the text. The book deals with the American Red Cross work during the war period and the months immediately following, and does not attempt to take up post war activities. Everyone knows that the Red Cross did a wonderful work in Europe during the war period, and in view of the fact that the citizens of the United States voluntarily contributed more than $400,000,000 for Red Cross work, much was expected. It is with the view of letting the American people know what was accomplished that a series of books on the subject have been prepared. The one dealing with Red Cross activities in France is especially interesting.

THE ESSENTIALS OF HISTOLOGY—By Sir Edward Sharpey Schafer, F.R.S., Professor of Physiology in the University of Edinburgh; formerly Jodrell Profesor of Physiology in University College, London. Eleventh Edition. 578 pages. Lea & Febiger, Philadelphia and New York, 1920. Cloth, $4.50.

Eleven editions of a book is a recommendation which should not be ignored, but anyone who examines this last contribution from a well known physiologist and author of numerous textbooks will be convinced that this book is unsurpassed as a textbook for the student. In reality it is an elementary textbook of histology giving the student detailed directions for the microscopic examinations of the tissues. It is well illustrated, many of the illustrations being in colors. No effort has been spared to make the subject matter thoroughly intelligent to the average student.

EYE, EAR, NOSE AND THROAT—Volume 3 of the Practical Medicine Series. Edited by Casey A. Wood, C.M., M.D., D.C.L.; Albert H. Andrews, M.D.; George Shambaugh, M.D. Series 1920. 382 pages. Cloth, $1.75. Price of the series of eight volumes, $8.

While this series is published primarily for the general practitioner, at the same time the arrangement in several volumes, each devoted to special subjects, enables the specialist to acquire the latest information concerning his particular work. In reality this book represents most of what is worth while in the way of abstracts of current eye, ear, nose and throat literature for 1919. Many of the abstracts are made more interesting by the comments of the editors who are well known clinicians. The book is a valuable addition to any specialist's library.

THE WASSERMANN TEST—By Charles F. Craig, M.D., M.A., F.A.C.S., Lieutenant Colonel, Medical Corps, United States Army; Professor of Bacteriology and Preventive Medicine, and Director of Laboratories, Army Medical School, Washington, D. C. Formerly Curator, Army Medical Museum; and Commanding Officer Yale Army Laboratory School. Second Edition. Illustrated with colored plates, halftone plates and sixty-one tables. 280 pages. C. V. Mosby Company, 1921. Cloth, $4.25.

As we had occasion to say in reviewing the first edition of this work, we hardly think that any physician who is doing any laboratory work can afford to be without this book. This second edition represents a revision of practically all of the chapters and even a rewriting of many, so that it is thoroughly up to date and represents the latest advances in making the complement fixation test for syphilis. Many modifications based upon extended experience in the government hospitals during war service have been added as an improvement to the technique of the test. The work is highly recommended to all those doing bacteriological work.

A TEXT-BOOK OF DERMATOLOGY—By J. Darier, physician to the Hospital Saint-Louis, Member of the Academy of Medicine, Paris, France; Honorary Member of the American Dermatological Association, etc. Authorized translation from the second French edition. Edited with notes by S. Pollitzer, New York, Ex-President of the American Dermatological Association; Corresponding Member of the French Society of Dermatology and Syphilography, etc. Illustrated with 204 engravings and 4 colored plates. 770 pages. Lea & Febiger, Philadelphia and New York. 1920. Cloth, $8.50.

This book covers the entire domain of cutaneous dermatology and is as concise and practical as possible while still conveying the essential data necessary for an intelligent idea concerning diagnosis and treatment. The material has been arranged according to a plan that is not usually customary, though it seems to be a most logical one. Thus the first part is devoted to the morphology of the dermatoses and is divided into eruptive and non-eruptive dermatoses, whereas the second part deals with the classification according to the nature of the disease. Hence in the second part are discussed artificial dermatoses, parasitic dermatoses, infectious dermatoses, neuro-dermatoses, tumors of the skin, etc. The book concludes with an excellent chapter on therapeutic notes, in which is incorporated numerous prescriptions which are applicable to various classes of cutaneous lesions. The first edition of this work was exhausted several years ago, and this second edition will be appreciated by all those physicians who wish to obtain the latest information on the subject of dermatology by one of the leading French dermatologists. The value of the book is enhanced by explanatory notes and suggestions by the translator, who is one of our most distinguished American dermatologists.

PUBLIC HEALTH AND HYGIENE—By William Hallock Park, M.D., Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College, and Director of the Bureau of Laboratories of the Department of Health, New York City. Illustrated with 123 Engravings. 884 pages. Lea & Febiger, Philadelphia and New York, 1920. Cloth, $10.

This book is intended for public health officials, but will prove of interest to physicians and medical students who are interested in hygiene in relation to public health. The subject matter has been presented in a practical way by a large number of specialists actually devoting themselves to the subjects treated by them. Not only the people but the medical profession is appreciating the necessity of paying more attention to hygiene and its practical application in preventive medicine. All of the various phases of the subject are treated comprehensively and intelligently in this well written book. An idea as to the comprehensiveness of the work may be obtained by noting the subjects treated in the various chapters which are as follows: Relation of Microorganisms to Disease; Antimicrobal or Antiprotein Substances Individually Considered; Prevention of Individual Infectious Diseases; Practical Use of Disinfectants; Epidemiology; Sanitary Surveys; Air and Health—Ventilation; Housing; Food; Vitamines; The Preservation and Adulteration of Food; Bacterial and Other Contaminations of Milk. Their Relation to Public Health; Bacterial Infections and Parasitic Diseases from Milk, Meat and Other Foods; The Soil; Water Supplies and Their Purification; Sewage and Waste Disposal; Housing and Plumbing; The Sanitation of Swimming Pools; Personal Hygiene; Additional Practical Points in Personal Hygiene; Military Hygiene; Rural Public Health Work; Tropical Hygiene; Industrial Hygiene; Child Hygiene; Sociologic and Economic Aspects of Disease; Public Health Education; Mental Hygiene; Mental Defectives. Preventing and Controlling Measures; Maritime Quarantine; Vital Statistics.

THE STORY OF THE AMERICAN RED CROSS IN ITALY—By Charles M. Bakewell. New York, the MacMillan Company, 1920. Cloth, $2.00.

As stated in the introduction, this book is intended to tell the American people, who contributed so generously to the Red Cross Fund, the simple tale of what their dollars did in Italy. It is an interesting

(Continued on Advertising Page xviii)

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(Continued from Page 174)

story of the service that the Red Cross rendered in alleviating as far as possible the sufferings of the stricken people after more than two years of strenuous fighting. The material aid given the stricken people extended from one end of Italy to the other, and was not confined strictly to the area occupied by the fighting forces, but took into consideration relief for the needy families of soldiers, and assistance to a poverty stricken populace suffering from the ravages of a devastating war. It not only tells what was done, but how it was done and without attempt to give praise or credit to individuals. The book concludes with a number of interesting tables showing receipts and expenditures, with a detailed report as to how the money was expended. Also several chapters are given over to a list of the personnel of the Red Cross in Italy.

BLOCK ANESTHESIA AND ALLIED SUBJECTS, with special chapters on the Maxillary Sinus, the Tonsils, and Neuralgias of the Nervus Trigeminus for Oral Surgeons, Dentists, Laryngologists, Rhinologists, Otologists, and Students, by Arthur E. Smith, D.D.S., M.D. 896 pages, 595 illustrations. Cloth, $15.00. St. Louis, C. V. Mosby Company, 1920.

While this work appears to have been written and published for the dental profession, yet it is a valuable text-book for all members of the medical profession who are interested in the subject of local anesthesia. As is well stated by a friendly critic, "He who reads this book will be more deeply impressed than he ever was before with the breadth and scope of local anesthesia." The chapters on the history of general as well as local anesthesia, the development, methods of applying, and the methods of producing local anesthesia are interesting, but of special interest are the chapters dealing with the block anesthesia used in various surgical operations about the head. The author emphasizes the necessity for accuracy in the technic and points out that failure means in most cases incompetence and inaccuracy in technic. Today the modern trend is to entrust the administration of the general anesthetic to specialists, and a large number of hospitals have a trained anesthetist on the medical staff. The modern surgeon no longer regards the anesthetist as the least important factor in the performance of the operation, but fully realizes that in many cases the anesthetist's responsibility is as great as that of the operator himself, and there is a growing demand for the intelligent and skillful use of local anesthesia. The operator who administers either a general or local anesthetic should have a knowledge of physical diagnosis, the therapeutic and toxic actions of anesthetic drugs, treatment of syncope, shock and collapse, etc. Block anesthesia requires a thorough mastering of the technic, and this may be accomplished by the average student if he goes about it in the proper and scientific way. The author has, therefore, given special attention to the details, and has elucidated the subject by a very large number of beautiful illustrations. He especially teaches that physical diagnosis is essential to determine which anesthetic is best for the particular case, though he does not hesitate to say that local anesthesia has an almost unlimited field of usefulness, and is deserving of more consideration than it usually receives. The chapter on blocking for tonsillectomies and for operations upon the nasal wall and septum will prove of value to the laryngologists and rhinologists because it gives a method of procedure that is a departure from processes used in the past. Likewise the chapters on tic douloureaux, and operations upon the maxillary sinus will prove valuable to the general surgeon as well as the nose and throat surgeon. The book will be found of interest to anyone who practices local anesthesia and we believe that every special as well as general surgeon should have a copy of it in his library.

GEORGE MILLER STERNBERG: A BIOGRAPHY—By his wife, Martha L. Sternberg. 232 pages with illustrations. Cloth, $5.00. Chicago American Medical Association, 1920.

As the editor of the *Journal of the American Medical Association* well says, "The name of Dr. Sternburg immediately calls to mind one of the great episodes in the medical profession, that of the conquest of yellow fever, in the successive stages of which three medical officers of the United States Army, Drs. Sternberg, Reed and Gorgas, played the leading role." Dr. Sternberg served as an army surgeon throughout the Civil War and the Indian Campaigns where he acquired valuable experience in combatting cholera and yellow fever. He was a pioneer worker in bacteriology, having discovered the pneumococcus in 1880 and was the first in this country to demonstrate the organisms of malaria, cholera, and tuberculosis. The practice of modern disinfection is based on Dr. Sternberg's researches on the value of commercial disinfectants. As Surgeon General, Dr. Sternberg directed the medical activities of the army during the Spanish-American war, founded the Army Medical School, organized the nurse corps and the dental corps, and established many military hospitals throughout the United States, including the tuberculosis hospital at Fort Bayard. By the establishment of laboratories and by personal encouragement he inspired medical officers of the army to engage in research work, to the development of which he had spent the best years of his life. Many scientific investigations were conducted during his term as Surgeon General, the most important of which related to tropical diseases, typhoid fever and yellow fever. During the Spanish-American war he recommended the appointment of the Typhoid Fever Board which made an investigation of typhoid fever in the military camps and led to the formulation of adequate measures of prevention. His interest in yellow fever never flagged. He fought several epidemics of the disease in the cities and military posts along our coast, and himself suffered a severe attack of the disease. He was a member of the first Havana Yellow Fever Commission and he made exhaustive studies of the disease in Cuba, Mexico, Brazil and other tropical countries. One of the most brilliant discoveries in the history of medicine resulted from his appointment on the Yellow Fever Board in May, 1900, which by human experimentation proved conclusively that yellow fever is transmitted by mosquitoes. The practical application of this discovery resulted in the eradication of yellow fever from Havana and contributed to the successful building of the Panama Canal. After his retirement from the Army, he did much to improve housing conditions among the laboring classes in Washington, and toward the prevention of tuberculosis. He was the author of a manual of bacteriology, and of several other works on special topics, notably on malaria, immunity, serum therapy and infection. He was highly honored during his lifetime, and was president of the American Medical Association and of many other scientific societies. The story of General Sternberg's life is one of arduous devotion to duty, of unflagging industry, and of unexcelled patriotism. The biography has been written with the sincere hope that the life and work of Dr. Sternberg may serve as an inspiration to the present and future generations of American physicians to achieve renown in the science of preventive medicine.

1921

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Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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ORIGINAL ARTICLES

CANCER OF THE BREAST*

MILES F. PORTER, A.M., M.D., F.A.C.S
FORT WAYNE, INDIANA

Cancer of the breast is essentially a disease of women as the proportion of males to females is less than one to one hundred. The most common form is scirrhus, though the microscopic and clinical classification frequently disagree and as Ewing[1] says, "the various microscopic features may be combined in different degrees and many fully developed carcinomas exhibit all of them from a very early period." Numerous sections are often necessary for the diagnosis of malignancy and should always be made for classification. Practically speaking cancers may be said to evolve from pre-existing cells and in the early period of their existence they do not present either clinical or microscopic features that may be said to be pathognomonic. Frequently on former occasions I have said that tumor was a relatively late sign of cancer. I have recently had two more cases which corroborate this opinion and I want to repeat here that abnormal discharges from the breast and retraction of the nipple occurring separately or coincidently should be regarded as signs of malignancy until proven otherwise. The character of the discharge is not diagnostic. Frozen sections should be made in cases of doubt and a positive report should be accepted by the operator provided it is in accord with the macroscopic and clinical findings, but in case there is lack of agreement between the microscopic and clinical findings it is wiser to be guided by the clinical findings, always remembering that the patient should be given the benefit of the doubt by doing a reasonably radical operation. I say a "reasonably" radical operation because it is not deemed necessary to remove the pectoral muscles and axillary lymphatics in those early cases in which the histologic malignancy does not pass the membrana propria[2]. It should be remembered that occasionally although rarely cancer of the breast occurs in the young. I have seen one case in a girl of seventeen and two cases are reported[3] as early as eleven years. The influence of the married state on the production of cancer of the breast is an unsettled question, but that pregnancy and especially nursing contribute to the development of cancer of the breast there can be little doubt.

The facts available do not, in the writer's opinion, bear out the dictum of Benedict "that heredity plays no notable part in cancer". On the contrary there is little or no reason for doubting the transmission from parent to child of a tendency to cancer.

All tumors of the breast should be regarded as malignant until it is proven that they are benign. This proof can be secured only by careful microscopic examination. It follows therefore that all tumors of the breast should be excised, and examined microscopically and further procedure based upon the result of this examination. Ten years ago in a paper[4] read before this Association I ventured to coin the term "potential cancer" for those lesions that are known to become at times malignant. The term is now in common use together with the cognate term "precancerous" to designate those conditions which although not malignant in the light of present day knowledge nevertheless carry with them the menace of malignancy.

A general thorough appreciation by the profession and the public of the known facts about early cancer would result in the saving of thousands of lives annually. The causes of failure to secure permanent cure of cancer of the breast by surgical measures, mentioned in the order of their importance, are metastasis via the lymph channels to the axilla, the chest and the abdomen, and local recurrence. Torok and Wittelshofer (quoted by Ewing) found metastases in 62 percent of 119 cases in which there were no axillary nodes. The absence of axillary involvement therefore does not preclude the possibility

*Presented before the Indiana State Medical Association, at the South Bend session, September, 1920.

(1) Neoplastic Diseases—1919—Page 452.
(2) Mac Carty American Journal Medical Sciences —Vol. 157, 1919, Page 663.
(3) Miles F. Porter—Transactions A. A. O. G. 1919.
(4) Journal A. M. A., Vol. 55—Page 775, 1910.

of metastases. *Per contra* the existence of axillary nodes does not mean the existence of internal metastases. Axillary involvement is not therefore a bar to operation. Many secondary operations have resulted in permanent cures, hence it follows that the rule should be to remove recurrent nodules as soon as they are found. X-ray examination is a valuable aid in determining the presence or absence of internal metastases. In this connection it is well to recall the fact that practically all properly performed operations for the removal of carcinoma of the breast, whether they result in permanent cure or not, are beneficial to the patient either in the way of prolonging life or making it more livable or both.

In the preparation of this paper it is assumed that there is entire agreement among surgeons that the best treatment for cancer of the breast is early and complete removal by the knife, and that the only question open to discussion is how best to apply this general rule to the particular case. Results all too frequently remind us of the fact that our operation was too late but neither patient nor doctor ever laments a too-early operation.

Properly administered x-ray treatment after surgical removal is beneficial and should be resorted to more generally than it is. But it should be emphasized that the use of the x-ray or radium prior to surgical removal should, save in exceptional cases, be proscribed in cancer of the breast. By exceptional cases is meant those past hope of successful removal and the suspicious skin lesions that one sometimes though rarely sees.

The number of operative plans advised for removal of cancer of the breast is great and of each perhaps something good may be said, but no one may be said to be the best. It is well for the surgeon to wed himself to no particular plan but make himself master of the whole situation and then to do that operation which best suits the case in hand. It is well however to keep in mind certain cardinal principles:

1. No sacrifice in the way of time, cosmetic results, or utility is too great to make for the cure of the patient, but unnecessary mutilation is to be avoided.

2. Properly planned incisions with undermining of the skin and at times mobilizing of the opposite breast will make it possible to close nearly all of these wounds.

3. The posterior thoracic nerve should be preserved.

4. The flap lining the axillary space should be held snugly in the apex by stitches or dressing to avoid subsequent inability to elevate the arm.

5. Careful and complete hemostasis adds to the safety, comfort and convenience of the patient and will frequently do away with the necessity for drainage and allow healing of the wound under the primary dressing.

6. Early use of the arm should be encouraged.

DISCUSSION

DR. WILLIS D. GATCH (Indianapolis): The subject of this paper is an important one and I think we will in the main agree with the position taken by the essayist. Certain broad principles should be kept in mind in our treatment of any suspicious lesions of the breast. It is an old saying that the easier the diagnosis the harder the cure, and the harder the diagnosis the easier the cure. This simply means that these cases are easy to cure if you get them early, and hard to cure if you get them late. The propaganda through the press, medical and lay, warning people of the necessity of being on the lookout for early signs of malignancy, is bearing fruit, and women are coming in with early lesions—lesions which it seems impossible to diagnose without an exploratory incision. Our old reliable test of placing the patient in a good light, and making the breast describe the greatest possible excursion on the chest wall, watching meanwhile for signs of retraction of the skin is perhaps as good a test as any for early cases. We make a bad mistake if we wait for retraction of the nipple and invasion of the skin and lymph nodes. In case you are not sure, explore. I often lay open the lesion and take out a piece for frozen sections being just as thoroughly prepared as those made by the slow method.

I agree with Dr. Porter's statement that it is unnecessary in some cases to remove the pectoral muscle. The statement was, "that in cases in which there is epithelial hyperplasia without any break through the basal membrane, it is not necessary to do more than remove the breast". I do not regard these cases as cancer, but as precancerous lesions. I think if you have real cancer there is usually very little difficulty in recognizing it either under the microscope or in the gross.

DR. THOMAS C. KENNEDY (Indianapolis): I agree with the essayist that these cases should be operated, but I want to call your attention to two classes which have not been mentioned here. We have a large number of these cases of cancer of the breast who absolutely refuse operation; and then we have a second class in which there is some contra-indication for operation, such as age, a head or kidney lesion, etc. In these cases what shall we do? Shall we leave them without any treatment, or shall we permit them to go to the quack and be burned

and blistered, for they are not satisfied to go along in that same kind of treatment. In our work at the radium laboratory in Indianapolis we have always advised every case of cancer of the breast to be operated. Until about four years ago we refused to treat any case with radium that refused operation. Four years ago last month a physician in the southern part of the state brought his mother, who had cancer of the breast, primary lesion, but on account of her age and also a mitral lesion she absolutely refused operation, so we undertook to treat her with radium. There was complete retrogression of the mass, the axillary metastasis disappeared, and she is alive and well today, four years after treatment.

About three years ago another physician brought his mother-in-law to me. Her breast was ulcerated and in such condition that the blood showed through her clothes. We did not want to undertake this case, as the conditions were such that it seemed absolutely hopeless, but the physician insisted and we treated her and she is alive and well today. There is some cicatricial tissue, and whether it is malignant or not I do not know, but she is clinically well.

Since that time I recall four other cases that we have treated with radium in which there has been complete disappearance, a clinical cure effected. Now the question arises, would it not be advisable to treat some of the operable cases? In other words, is it necessary for us to insist so strongly that these cases should be operated when we have had success with a certain number of cases? I am not advising the use of radium in operable cases. I believe that we should resort to surgery, but I believe that with improvement in our technique, and experience with a greater number of cases, the number of operable cases will be somewhat limited. Operation frequently gives a useless arm because of a blocking of the lymphatics, and the arm becomes enormously swollen. They are laid up in the hospital for quite a while, there is pain from the operation, while with the application of radium there is absolutely no pain, the treatment takes comparatively short time, and they are not in the hospital very long. I believe that within a short time we will be using radium in a greater number of cases which have heretofore been considered operable.

I think it is Lazarus Barlow of England who says that radium breaks down the cancer cells and the broken down cells are absorbed and produce a true immunity against their growth. In other words, it is a vaccine. If this is proven to be true, radium will be more efficient than surgery. Radium not only produces mitosis of the cancer cells, but it also stimulates the good tissue to a greater resistance. I believe it will be only a question of a short time until we are treating more of these cases with radium and operating fewer of them.

DR. H. A. DUEMLING (Fort Wayne): I am heartily in accord with what Dr. Porter brought out in his paper, and I want to endorse what Dr. Gatch said about the removal of these precancerous conditions. We know these conditions frequently progress to true malignancy. In those cases it is not necessary to do as extensive operation as in a well advanced case, but still, considering how much is at stake, I do as extensive operation in those cases as the other. The time consumed in recovery is not great, the deformity is not visible any way, and you have the additional assurance that you have destroyed the ordinary avenues of metastasis. I would take out the glands of that axilla. I believe, too, in practically all cases where there is involvement of the lymphatics, particularly the neck, these cases are totally inoperable unless they are put into our hands after treatment with radium which assures us that the metastasis has been destroyed.

Cancer of the breast occurs sometimes so insidiously that the words of Dr. Porter in regard to unnatural discharges should be heeded by all of us. The Mayos have shown that a bloody discharge from the nipple is a very serious symptom that needs to be explained and investigated until the truth is arrived at.

In regard to the extensive operation requiring the removal of an entire arm, I have yet to see a case that has even been benefited beyond a few months at the outside, and I do not believe such cases should be subjected to operation. And, furthermore, if more of them were sent home it would result in other cases applying for treatment in a seasonable time.

As to the various lymphatic injections, of course no physician would be guilty of wasting the days of grace by any such tomfoolery.

PERNICIOUS ANEMIA AND ITS TREATMENT BY HOMOHEMOTHERAPY*

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Progress in our study of pernicious anemia cannot advance very far so long as nothing definite regarding its cause is known. In spite of the steadily increasing knowledge regarding some of the clinical aspects of this disease, its

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etiology still remains obscure. Indeed, as Osler[1] points out, our position with reference to the cause of pernicious anemia is no better than it was in the days of Addison, whose original description may still be used as embodying practically all the distinguishing clinical features of pernicious anemia.

Our present-day conception is that pernicious anemia is the result of the activity of unknown hemolytic agents. These agents, whatever their nature may be, exhibit a special specific affinity for the blood and blood-forming organs, and the spinal cord. Although the pernicious manner in which these destructive agents act on the blood and spinal cord is understood, nothing whatever is known regarding their true nature and origin.

Of some importance relative to the unanswered question of the origin of these agents may be the occurrence of five cases of pernicious anemia at one time in a small community of some 2700 inhabitants in Northern Indiana. Clinically these cases were unmistakable, and with the aid of thorough laboratory investigations the diagnoses were established as conclusively as clinical diagnoses can be. Following is the order in which they came under observation in the private practice of Dr. G. W. McCaskey*:

Case 1. P. M., male, age 65, first seen on March 7, 1919.

Case 2. D. C. H., male, age 63, first seen on June 26, 1919.

Case 3. Mrs. P., female, age 64, first seen on Aug. 11, 1919.

Case 4. J. T., male, age 65, first seen on Aug. 30, 1919.

Case 5. J. W. W., male, age 72, first seen on July 23, 1920.

The simultaneous presence of these five cases of pernicious anemia in a community in the ratio of approximately two per thousand of the population is apparently more than a mere coincidence. It is possible that there may have been present in this community at the same time other cases of this disease which did not come under our observation. If this be true, obviously the ratio would be even greater. Although the incidence of this disease "in any community is a matter of keenness on the part of practitioners", such an unusually high rate as that given here is certainly highly suggestive. The idea suggests itself that the agents causing this disease are exogenous rather than endogenous, *i. e.*, substances that come from outside the affected individual; that they may appear in sufficient number or acquire virulence enough to incite the disease in quite a large percentage of a community; and that in these respects, at least, they exhibit a striking similarity to pathogenic agents causing definitely known infections.

In the treatment of pernicious anemia the value of intravenous administration of human blood has become generally recognized. This therapeutic procedure has long been known as transfusion, but it should now be replaced by the more appropriate designation "homohemotherapy", a term introduced by Sicard and recently used by Voncken[2]. The splendid work of Bernheim[3] in reviewing and summarizing our knowledge as to the use and value of blood transfusion in the anemias has done much to "popularize" this therapeutic measure. In the past, injections of large amounts of blood were the rule; it was rather exceptional to use small amounts. Recently, however, the pendulum has begun to swing in the opposite direction, and clinicians are beginning to realize more and more that repeated intravenous homohemotherapy with small amounts of blood apparently are of greater benefit than single large transfusions. How the intravenous injection of blood brings about its therapeutic effect, or just what its beneficial effect is due to, is at present not clearly understood, for the benefits derived from this procedure, as recently pointed out by Karsner[4], are out of proportion to the amount of blood used. Not only do repeated small injections seem to be of greater benefit, but they are undoubtedly much safer. Karsner[4] issues the warning that it is imperative to bear in mind that in chronic anemia—like pernicious anemia —more harm than good may be done by large transfusions, because in such cases the bone marrow has adjusted itself to the small number of circulating red blood cells, and the sudden introduction of a great mass of blood is apt to produce "a serious depression of the already relatively inactive bone marrow", so that repeated small injections in all probability are to be preferred to single large transfusions. Evidently Bernheim's[3] prediction that "future experience may teach that much smaller doses (of blood) given at definite periods will prove more efficacious in certain conditions" already seems to have been borne out by clinical experience.

Furthermore, homohemotherapy with small amounts of blood is to be preferred to single large transfusions because of the simplicity of this method. A glass syringe of 50 Cc. or 100 Cc. capacity containing enough sodium citrate solution to make about one percent of the total

(1) Osler, W., and McCrae, T.: The Principles and Practice of Medicine, New York and London, D. Appleton & Co., 1920.

(*) Dr. McCaskey intends in the near future to make a thorough investigation of all possible phases and questions bearing upon the presence of all these cases at the same time in this community.

(2) Voncken, J.: Homohemotherapy, J.A.M.A., 75, 307 (July 31), 1920.

(3) Bernheim, B. M.: Blood Transfusion Hemorrhage and the Anemias, Philadelphia and London, J. B. Lippincott Co., 1917.

(4) Karsner, H. T.: Laboratory Problems of Blood Transfusion, J.A.M.A., 76, 88 (Jan. 8), 1921.

volume of blood used, and a suitable needle is all the apparatus that is really required. The method is so simple that it can be carried out by anyone who understands asepsis and knows how to get a needle into a vein properly. Neither the anxiety nor the fear attendant upon single large transfusions are necessary. There need be no hesitancy on the part of the physician to withdraw several small amounts of blood from one or more compatible individuals, and certainly no layman will dread the giving up of a few ounces of blood as much as he would the loss of a quart or more.

Intravenous administration of blood is not infrequently followed by febrile reactions characterized by chill, fever, nausea, vomiting, headache, etc., that may be more or less severe. A great deal of attention has been directed to the study of these reactions, in the hope of finding out how and why they are caused, but as yet these questions have not been satisfactorily answered. They are often referred to as "citrate reactions", evidently because they are apt to occur after the use of citrated blood more frequently than after blood which is not citrated. Although it may be true that the reaction is due in part to the citrate, the latter cannot be blamed for all of it, because the same reaction does occur after the injection of uncitrated or untreated blood. It is very unfortunate that these reactions occur in spite of every precaution taken to demonstrate that the bloods of both donor and recipient are compatible and match perfectly by every known laboratory test, and that the reactions cannot be foreseen by any clinical or laboratory method available at present.

Evidence very recently brought forth[5] indicates that probably the most important factors in the causation of these reactions are, (1) changes in the blood platelets, (2) associated early coagulative changes in the blood, and (3) possible injury to the erythrocytes by the sodium citrate. No matter whether the red cells are injured by the citrate or not, it is highly probable that some unknown chemical or molecular change takes place in the blood—either plasma, or cells, or all of it—directly after it leaves the vein of the donor, so that when it is injected into the vein of the recipient it enters not as the original native substance but as a somewhat modified foreign protein. The subsequent febrile reaction that sometimes occurs is exactly like the reaction so often observed after the intravenous injection of a vaccine or foreign protein when carrying out parenteral protein therapy. There is, indeed, no clinical difference between the febrile type of post-transfusion reaction and that which follows the intravenous injection of vaccine or foreign protein. Nor is there any clinical difference between either of these reactions and that type of post-salvarsan reaction consisting of the same clinical features, *i. e.*, chill, fever, nausea, vomiting, headache, etc. In their clinical manifestations the reactions following these different therapeutic measures are identical. The biologic phenomena underlying the production of these symptoms may be different for each one of these measures, but, on the other hand, they may be identical, and an explanation that may clear up any one of them may also clear up the others.

The close similarity between the reaction following an intravenous injection of blood and an intravenous injection of salvarsan or neosalvarsan suggested the possibility of preventing these post-transfusion reactions by a preliminary hypodermic injection of suprarenalin chlorid. Experience with the salvarsan products already has shown that often a reaction after the use of one of them can either be completely averted or, at least, very much modified by the preliminary administration of suprarenalin chlorid. Accordingly this method was tried out with the idea of preventing the post-transfusion reaction, and while there has yet been no opportunity to use it to a large extent, when it has been used it has thus far not failed to yield the desired result. Particularly in a case of secondary anemia due to carcinoma of the cervix, in whom homohemotherapy had to be resorted to while radium therapy was being applied, was this "prophylactic" value of suprarenalin chlorid demonstrated. In this case the first donor was a son, who was used six times as donor, after which a daughter and niece were used as donors. After the first injection of 75 Cc. of the daughter's citrated blood, nothing happened. After the second injection of 100 Cc. of her blood, the mother had a moderate febrile reaction with chill. Subsequently the daughter's blood was given three more times, 4 ozs., 4 ozs., and 100 Cc., respectively but a preliminary injection of from 0.5 Cc. to 10 minims of suprarenalin chlorid was given from 20 minutes to one-half hour each time before the blood injection, and there was no reaction whatever following any of these, except a slight epinephrin reaction. After the first injection of 60 Cc. of the niece's citrated blood, the aunt had a definite chill and febrile reaction. After the next two injections of the niece's blood, 4 ozs. one time and 100 Cc. the other, there was no reaction, but following the next injection of her blood, 3 ozs., there was a rather severe chill and reaction. Thereafter the aunt was given a "prophylactic" of 10 minims of suprarenalin chlorid about 20 minutes before each of the next two injections of her niece's citrated blood, and again there was no

(5) Clough, P. W., and Clough, M. C.: Study of Reactions Following Transfusion of Blood, South. M. & S. J., 14, 104 (Feb.), 1921.

reaction either time, except the slight epinephrin reaction. There has been no opportunity as yet to test this "prophylactic" in pernicious anemia to any extent, but the favorable results already obtained justify the presentation of this method, in the hope that a wide use of it may confirm or contradict its value.

CONCLUSIONS

1. An unusually high incidence of pernicious anemia is recorded.

2. This high incidence suggests that the causative agents are exogenous rather than endogenous, and that they may be similar to agents causing known infections.

3. Repeated injections of small amounts of blood apparently are of greater benefit, are safer, and are more easily given than single large injections.

4. The reaction that sometimes follows may be due to (1) changes in the blood platelets, (2) associated early coagulative changes in the blood, (3) possible injury to the red cells, and (4) to unknown changes in the blood whereby it becomes essentially a foreign protein.

5. Preliminary subcutaneous injection of suprarenalin or adrenalin chlorid is of value in the prevention of such reactions, and its use as a "prophylactic" for that purpose is therefore urged.

I wish gratefully to acknowledge my indebtedness to Dr. G. W. McCaskey, whom I assisted in the study of the cases mentioned, for his kind permission to use the clinical data here presented.

INFECTIONS OF THE HAND*

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Intercourse with men who labor with their hands will impress one with the vast economic loss accruing from the effects of apparently trivial local infections. The prick of a pin, a scratch from a piece of tin, or a cut from a tool will result very frequently in permanent disability that will reduce materially the productive output of the individual. Vast sums, also, are disbursed annually by indemnity companies in payment of damage compensation for permanent disabilities to these injured. Many years of a fair amount of industrial surgery have impressed upon the writer the importance of these infections. It is of importance to note that there was a time in almost every case when the very simplest procedure would have prevented disaster. The opening up and disinfecting of the slight wound would have resulted in almost immediate restoration of the injured member, and possibly without a single day's loss of time. With the present arrangement in most of our factories for rendering first aid to injured, it should be easy to arrange for these cases to reach the surgeon in time for him to render such treatment to the case as would prevent the serious damage we so frequently see. Whatever time, however, the case may reach the surgeon, the all important thing is that he know what to do when the case reaches him. The writer is sure he has left his share of disabled hands scattered along through the years—but these cases with many seen in consultation confirm the opinion that the resulting disability usually is not due to the essential gravity of the case, but that it is due to failure to make a proper diagnosis and follow-up treatment. Every industrial surgeon should have a card up in his office admonishing him to "Make a Diagnosis".

The distal phalanges are most exposed to injury and are subject to certain infections peculiar to their anatomy.

A paronychia or ordinary "runaround" may disable a finger for several weeks and possibly destroy a nail by reason of failure to diagnosticate and lack of understanding of the pathological condition.

A felon is another infection peculiar to the distal phalanx owing to its anatomical structure. The pulpy end of the finger is a closed sac composed of connective tissue and fat reaching from dermis to bone. Pus from a slight injury in this shut sac would have no outlet and does great harm unless promptly opened. One should not wait for fluctuation however. This will not be found until damage has been extensive, and to wait for this means a protracted convalescence and possible permanent impairment. Having a tender, painful distal phalanx with induration and swelling limited to the phalanx—incision should be made promptly.

We shall now discuss those more serious infections which, if not treated at the proper time and in proper manner will result in disabling and deforming changes in the hand, namely: fascia space abscesses, tenosynovitis and lymphangitis. A thorough knowledge of the anatomy of the hand is essential to a proper understanding of the pathological conditions. It is therefore necessary to draw your attention to some of the important anatomical arrangements of the hand, first stating that this paper will discuss only the more serious and dangerous infections, omitting many interesting but less serious ones for lack of time.

The palm is divided into two principal fasciæ spaces—the middle palmar space and the thenar space. They are separated at the middle metacarpal bone by a strong fibrous partition. The

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middle palmar space lies to the ulnar side, between the middle metacarpal and the fifth metacarpal, vertically covering about the middle two-thirds of the fourth metacarpal. It lies close to the bones, being covered in by the palmar fascia, ulnar bursa, flexor tendons and the superficial vessels. At its distal margin it closely approaches the proximal ends of the digital tendon sheaths and lumbrical canals corresponding to the middle, ring and little fingers. This proximity becomes of greatest importance in infections of these fingers. The thenar space lies to the radial side of the middle metacarpal and extends from this bone to the radial side of the palm. It is covered in by dense fibrous tissue blending with the palmar fascia and the flexor tendon of the index finger. The lumbrical canal and tendon sheath of the index finger stand in the same relation to the thenar space that the middle, ring and little fingers do to the middle palmar space and are of like importance in case of infection. The middle palmar and the thenar spaces do not overlap and only rarely do they communicate.

Most important in relation to these spaces are the position of the lumbrical canals, the tendon sheath endings and the ulnar bursa. The lumbrical canals lie on the radial side of the metacarpophalangeal articulations of the fingers and lead from their insertions proximally into the palm—the index approximating the thenar space, the middle, ring and little finger canals approaching the middle palmar space. The tendon sheaths of the fingers begin distally just beyond the distal interphalangeal articulation and terminate opposite the metacarpo-phalangeal articulations—the tendons having no sheaths in the palm except as indicated hereafter. The ulnar bursa is the sheath common to the flexor tendons as they pass over the wrist. A prolongation of the sheath rather frequently extends well down on the little finger tendon, often closely approaching the little finger sheath and sometimes communicating with it. One may readily understand how an infection from the little finger may extend into the ulnar bursa, and from there either force its way upward into the forearm or rupture into the middle palmar space. And, indeed, if the condition be not relieved this will be the course of the infection. The radial bursa is formed from the sheath of the flexor longus pollicis and is sometimes involved in a neglected ulnar bursa abscess.

From this brief and imperfect description of the common location of infections of the hand one may form an opinion of the probable course an infective process will take. Infections of the distal phalanges do not as a rule advance as far as the hand except in cases that develop lymphangitis. Infections of the middle and proximal phalanges when neglected will reach the hand through the lumbrical canals, through a teno-synovitis which ruptures into one of the palmar spaces, or through the lymph channels. We find that an untreated infection of the index finger will proceed along the index lumbrical canal and into the thenar space. Or if the sheath be infected we shall have a teno-synovitis which will rupture into this space. In like manner an infection of the middle, ring or little fingers will proceed along their respective lumbrical canals or through their tendon sheaths and rupture into the middle palmar space. In case of the little finger the infection may take another course. As noted before there is a rather frequent connection between the tendon sheath of the little finger and the ulnar bursa. In such cases pus may enter the ulnar bursa rather than the middle palmar space. Infections of the thumb may open on the surface but if neglected will enter the radial bursa and create a most dangerous and disastrous situation.

We now approach the most important part of our subject, namely, the diagnosis of the various conditions arising from these various sources. Let us take a simple scratch or puncture of the index finger. If infection follow we have pain, redness and swelling of the finger, with probable localization of pus. A simple incision and drainage will restore the finger to health. Neglected a few hours and we shall find excessive tenderness along the course of the tendon sheath, most marked on the palmar surface at the metacarpophalangeal articulation. The finger is flexed and there is most intense pain on extension. These three symptoms carefully searched out will justify a diagnosis of teno-synovitis; namely, excessive tenderness over the course of the tendon sheath, partial flexion and intense pain on extending the finger. It may be that the infection has invaded the lumbrical canal of the index or middle finger, as it often extends by contiguity of tissue. Careful palpation at either side of the metacarpophalangeal articulation will elicit excessive pain at one or both of these points. Free incisions at this time will save serious trouble. If the case be seen late or if treatment have been improper, pus will have ruptured the tendon sheath or have followed up the lumbrical canals into the thenar space. There will now be much greater swelling of the hand. The thenar eminence stands out beyond the rest of the palm, ballooning out as if inflated. The dorsum, which has been markedly swollen in each of these conditions, is greatly swollen now. All the fingers are flexed partially and are spraddled out and swollen. The whole hand takes on the appearance of a boxing-glove.

Here we must apply all of our knowledge of anatomy and our best powers of observation in order to clear up the diagnosis. Note that

while all the fingers are swollen, more or less tender and are flexed, the index is purple, exquisitely tender, and evidently is affected more seriously than its fellows. All of the palm is very tender but the ulnar side of the palm has not lost its concavity. The thenar eminence is swollen greatly and protrudes abnormally into the palm. In the palm and fingers of a laboring man fluctuation rarely will be elicited by reason of the thick, hard callous and the palmar fascia. Having, therefore, a wound of the index finger with pain, redness and swelling, extending within a few hours or a day or two into the hand, with increasing severity and with ballooning of the thenar eminence, with temperature 100 to 103 degrees, and with the appearance of illness and suffering, one is safe in making a diagnosis of thenar space abscess. Having made this diagnosis no time should be wasted with poultices or local treatment. The tendon sheath should be opened. The lumbrical canal of one or both sides of the index should be incised. The thenar abscess should be opened by an incision between the first and second metacarpals, dorsally, and forceps passed through the thenar space until they impinge on the palm at the thenar crease, where a large counter opening should be made. Through and through drainage should be secured, rest in bed until convalescence is well established, hot boric fomentations until pain and swelling are reduced.

MIDDLE PALMAR SPACE ABSCESS

If the infective focus be in the middle or ring fingers the course of the infection will follow the same corresponding channels but will enter the middle palmar space. The same general and local symptoms will be present as in the thenar space abscess with these exceptions: the thenar eminence while swollen does not balloon out as in thenar space abscess. The concavity of the palm has disappeared and is replaced by a general fullness or bulging extending from the thenar eminence to the ulnar border and down to the web of the fingers.

Given a wound of the middle or ring finger with pain, redness and swelling, extending into the hand with increasing severity, with disappearance of the concavity of the hand and its replacement by well marked bulging of the ulnar side and with rise of temperature, one may safely assume that he has a middle palmar space abscess to deal with.

If the tendon sheath or lumbrical canal be involved it should be opened. Incision for opening the palmar space is made between the middle and ring or the ring and little fingers on the palm. It should begin at or a little above the flexion crease of the palm and extend well down to the web. This will miss the tendons and any important vessels. Forceps are introduced and spread. If there be evidence of pus on the dorsum a counter incision should be made, but this is seldom necessary. In neglected cases the septum dividing the middle palmar from the thenar space may rupture. This will obscure the diagnosis but with care it can be made. In such a case both spaces should be opened and drainage passed entirely through the palm from one opening to the other.

ULNAR BURSA ABSCESS

If the infection be of the little finger it may take the same course as the middle and ring fingers. It will be remembered, however, that in quite a large proportion of cases the ulnar bursa approaches the little finger tendon sheath or it may communicate with it. In such case the infection will probably enter the ulnar bursa rather than the middle palmar space. Here we shall have the same general symptoms, but the concavity of the palm is not lost and there is no bulging of the thenar eminence. However, there will be a pronounced swelling with great tenderness over the ulnar side of the palm and extending up to the annular ligament. There will be marked swelling of the hand dorsally with flexion of middle, ring and little fingers and great tenderness over the little finger tendon sheath. Ulnar bursa abscess may be complicated by middle palmar abscess. This is one of the most dangerous hand infections.

Ulnar bursa abscess when neglected will follow certain lines. It may rupture into the middle palmar space, it may break through into the radial bursa, or more frequently pus will pass under the annular ligament into the tissues on the flexor surface of the forearm. Here it lies too deep to be detected by fluctuation. When this occurs there is marked swelling of the arm, with induration, redness and pain. The last partially or entirely disappears in a few hours. The tenderness may also become less. The condition would appear to be difficult to diagnosticate but really it is not.

Given a primary injury of the little finger, with pain, redness and swelling extending into the hand, with dorsal swelling and flexion of the middle, ring and little fingers, with tenderness and fullness of the ulnar side of the palm without ballooning of the thenar eminence or loss of concavity of the palm—we suddenly find pronounced swelling of the forearm with redness and induration and increased pain and we may safely determine rupture of an ulnar bursa abscess into the forearm. The marked change in the forearm together with the rise of temperature will at once call our attention to this new complication. Early incision on flexor surface on both sides of the forearm about one and one-half inches above the lower border of the radius with through and through drainage will mitigate the damage.

We may have a dorsal abscess from extension of the infection from the palm. In such case the pus passes to the distal border of the palm and overflows through the web into the dorsal area. While this may occur, in my experience it is not frequent. All of the palmar infections are accompanied by a cellulitis of the dorsum, with marked redness and tenderness and excessive swelling. This closely simulates a dorsal localization, yet it is the exception to find pus in this area from extension of the infection from the fascial spaces. It is not advisable, therefore, to make through and through drainage of the hand unless pus can be demonstrated in the dorsum. Limitation of time makes it necessary to omit reference to many of the most interesting hand infections as well as the after results of neglected or improperly treated cases.

One of the most interesting and deceiving conditions is the so called "collar button" abscess. This is made by a superficial abscess under hard callous or skin. The pus being unable to reach the surface forces its way through a small channel into the deeper layers of tissue where it spreads out. We thus have a pocket of pus superficially and a pocket of pus situated deeply and connected by a small channel, thus forming a collar-button like abscess. When incising a superficial abscess located under strong thick tissue observation should be made for an opening into the deeper tissues.

LYMPHANGITIS

It is necessary, however, to speak of that most important and dangerous infection, lymphangitis. Here we have one of the most deceptive infections. One must be armed with every resource to meet the condition and firmly withhold the hand from meddlesome interference.

Beginning lymphangitis is usually characterized by a slight trauma and small amount of pain and swelling. Various classifications have been made and a number of different forms of lymphangitis are described, but in my opinion these different forms represent varying degrees of severity and different types of infective agents and for purposes of treatment need not be considered.

In mild types we have slight pain, swelling of the hand and arm with red streaks running up the arm which are tender to the touch. The epitrochlear or axillary glands are tender and indurated. All of this may clear up promptly and in twenty-four or forty-eight hours the injured member be ready for work. A more severe type is accompanied by temperature, malaise and headache. These require rest in bed, hot fomentations and elimination. There is also a fulminant type, characterized by rigors, headache, temperature 103 to 105 degrees, with pain and throbbing in the hand and arm.

The primary injury may appear insignificant although I have observed in most of my cases of severe lymphangitis that the point of injury is slightly œdematous and seems to be infiltrated and of a peculiar grayish color. This was not true of the milder types. Here, we are liable to err by incising the swollen area, but nothing would be more damaging to the case. Cutting vessels and lymphatics opens new avenues of infection and the case becomes more grave. General management of these cases taxes our utmost resources and is too complicated to discuss at this time. Above all withhold the knife. There is the greatest temptation to "open up" something, but the great majority get well or die without any localization of pus. Lymphangitis is easily diagnosticated. When this diagnosis is made we may understand that we have a grave condition to deal with. It requires rest in bed, hot fomentations to the affected arm and hand, regular elimination and good food. In a small number of cases localization of pus will be found at the point of injury, in the synovial sheath or at the epitrochlear or axillary gland.

I wish here to emphasize the importance of rest in infections of the hand. Rest in bed for all severe cases, dressed on splint and carried in a sling for less severe ones. In all infections of whatever severity I place a firm reliance on a well-fitted and well-applied splint. We do nearly all of this work under local anesthesia. Simple palmar or thenar abscess, teno-synovitis of the digits and lumbrical canals are done painlessly and successfully under local. General anesthesia is used when the forearm is to be drained or when there is great swelling of the hand requiring deep and extensive incisions.

CONCLUSIONS

1. Some one or more persons in every factory should be carefully instructed in the proper administration of first aid to the injured.
2. At the first sign of infection in the slightest of wounds employees should be instructed to report it at once and they should be sent to a surgeon.
3. A thorough knowledge of the anatomy of the parts is essential to the proper treatment of infections of the hand.
4. No time or pains should be spared in arriving at the earliest possible diagnosis.
5. Minutes are valuable in salvaging power and use of the hand and fingers after an infection has become localized.
6. Free incision and open drainage should be the rule. Do too much rather than too little.
7. Do not operate in lymphangitis until absolutely sure of localized pus and then think twice.
8. Rest in bed and the hand on a splint is one of our most saving resources.
9. Local anesthesia is most satisfactory in all but the most severe and extensive infections.

DISCUSSION

DR. JOHN W. SLUSS (Indianapolis): For a long time surgery and surgical procedures have been arbitrarily divided into two classes—major and minor. That is a custom which is pernicious and invidious and has led to the neglect of very many important conditions. For instance, these hand conditions have been classified as minor surgery, to the detriment of such surgical treatment. We cannot arbitrarily classify surgical practice in that manner. Surgery is good, bad or indifferent, and an attempt to call it major or minor is futile. One of the great merits of this paper—and it is one of merit and very timely—is the emphasis laid on the fact that treatment of these hand infections calls for the ripest surgical judgment and skill.

The doctor mentioned the fact that at some stage of these infections an operation might have been prevented. I want to emphasize the matter and methods of prophylaxis in these conditions. So many of the cases which we have to deal with nowadays are produced by machinery. They may seem quite trivial in character, and yet those which apparently are most trivial should be given careful attention.

In the matter of antisepsis I very rarely use soap and water in the treatment of the injured hand. In other conditions, especially in preparation for surgical operation, it is quite the procedure; but in the treatment of these slight hand injuries I find it usually sufficient in case the patient is a mechanic to cleanse the hand with gasoline and follow that with a liberal application of iodine. There is no class of injury so susceptible to the production of antisepsis as those of the hand, so that by cleansing the hand with gasoline and possibly following that with alcohol, next the application of iodine, and finally by the careful splinting that the doctor has emphasized, we may rest easy in the belief that the danger of infection is minimized. In case the patient is not a mechanic and his hand is not greasy or grimy, it is usually sufficient to cleanse it with alcohol and carry out the iodine and splint treatment.

But suppose your prophylaxis has been inefficient or that the infection has already developed before you get to it, a felon for example. A felon is the one infected condition about the hand which does not admit of prophylaxis, for the reason that the injury which produces the felon is usually so slight, either a scratch or a bruise or the prick of a pin, that the patient's attention is not directed to it until the damage is done. The point to be borne in mind is that the lymphatic arrangement of the last digit is quite different from that of other parts of the finger. The arrangement is such that the lymphatic dips directly from the surface down to the periosteum, so that almost immediately following contact with infection, the infective agent runs down to the periosteum. This applies only to the distal phalanx. So almost immediately we have an acute periostitis. That is what a felon is. The result is that very shortly, unless remedial measures are applied, the infection reaches the bone and you have necrosis of the distal phalanx. That is one infected condition which requires very early incision. The essayist emphasized the fact that it is advisable in many other infections to go slow with incision, but in case of a felon if you want to save the bone, early incision down to and through the dorsum is indicated. Having established drainage it relieves the bone of strain and tension and will oftentimes very materially shorten the progress of the disease and militate against deformity, which is very characteristic of these felons. Now, another case—the infection limited to the fingers, but you have a "boxing-glove" hand that he speaks of, in which the whole hand looks something like a ham, the fingers swollen and fixed. Usually there are two things that I ask myself in such cases. First, is the infection confined to the palmar surface of the hand, or is it more than that, is it a tenosynovitis? The doctor called attention to the fact that the sheath of the tendon of the little finger and the sheath of the tendon of the thumb communicate with the common sheath above the wrist. If an abscess is palmar in character an incision such as he outlines is indicated. In my opinion if the case is a tenosynovitis with the thumb and little finger involved, additional drainage, more and somewhat different from that the doctor described, is indicated. That is, to open up the tendon sheath—I am assuming that the infection has followed a sheath to the wrist and you find the wrist swollen—cut down upon the tendon sheath and open it up and slip a slender forcep into the canal; let it follow the sheath under the annular ligament into the wrist, and then over the point of the forcep you make a counter incision. The protruding point of the forcep is made to grasp a small drainage tube which is thus pulled through the canal establishing through and through drainage of the synovial tissue without having injured any of the structures. The same technique applies to the synovial sheath of the little finger.

In the case of palmar abscess the anterial arches are to be respected especially the deep one toward the wrist joint. Incisions in the fingers should follow the middle line of the palmar surface avoiding the joints.

The details of the after and late treatment should be fully discussed but time does not permit.

DR. FRANK G. JACKSON (Muncie): In response to the last statement of the doctor I will say that if you have an abscess of the radial bursa to be opened you can open up the thumb and palmar portion, but you cannot follow it into the forearm because the motor nerves of the thenar muscles are located at the distal border of the annular ligament and they will be cut if you go through. If you have a radial bursa abscess, open the palmar part and then open the bursa in the forearm. Carry your drainage through under the annular ligament, and you will get a good hand out of it.

FRACTURE OF BASE OF SKULL WITH CONCUSSION OF BRAIN

CASE REPORT

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I

A motion picture operator, age 17, entered the hospital June 19, 1920. He had been injured in a motorcycle accident. Family and past personal history were irrelevant.

On examination he was found unconscious, lying upon his back, writhing from side to side and moving all extremities. No abrasions were found about the body. Blood was flowing from both ears and nostrils. His eyes were closed, pupils equal, dilated and reacted to light. There was no paralysis of any part of the body. The pulse was regular and strong. Cheyne Stokes respiration was not present. T. P. R. 96—60—14. The bladder was distended. X-ray showed no perceptible fracture of skull.

Immediate medication—Ice bag to shaven head; catheterization; wiping away blood clots from exit of external auditory meati; morphine; straitjacket.

II

Daily notes on the case were as follows:

Second day—June 20. Patient is very restless. Max. T. P. R. 100.4—95—22.

Third day—June 21. Nausea and vomiting. Max. T. P. R. 99—110—24. Involuntary bowel movement for the first time.

Fourth day—June 22. Patient swallows fluids and liquid nourishment. Very irrational—no memory—does not respond to questions asked.

Fifth day—June 23. Patient uncontrollable. Max. T. P. R. 98—135—24. Spinal puncture performed. Fluid normal in content—not blood stained—under increased pressure. 30 Cc. removed.

Sixth day—June 24. Patient conscious for first time. Max. T. P. R. 97.5—80—22. Responds to questions.

Seventh day—June 25. Max. T. P. R. 98.5—90—22. Spinal puncture performed. Fluid normal in content—not blood stained—under slight pressure—10 Cc. removed.

Eighth day—June 26. Max. T. P. R. 97—80—22.

Ninth day—June 27. Max. T. P. R. 97—70—20. Voids involuntarily for first time.

Tenth day—June 28. Max. T. P. R. 98—70—20. Spinal puncture performed. Fluid normal in content—not blood stained—not under pressure—10 Cc. removed.

Up to this time the mental condition of patient became very much improved. Knew name—recognized father—has gradually become quiet. Bleeding from nostrils and left ear was checked on second day. Continued to bleed from right ear until the seventh day, at which time it had become serous.

III

Eleventh day—June 29. Patient is very restless again. Mental state is not as good as preceding day. Patient uncontrollable.

During the next two days temperature, white blood count and pulse rate increases with mania.

Fourteenth day—July 2. A large swollen area over the right mastoid region and angle of jaw is discovered, resembling Bezold's abscess, but slightly anterior. The serous discharge from the swollen right external auditory meatus is now pustular. A smear and culture discloses a pure strain of staphylococci.

A mastoidectomy was performed, but no pus was found in the mastoid cells or middle ear. A blue area upon the mastoid bone made it possible to outline the underlying mastoid cells. The mastoid cells were soft, necrotic, and filled with moist clotted blood. The mastoid incision was then extended and a decompression done, but the dura was left intact. The brain was found pulsating normally and showed no signs of meningitis or brain abscess. The incision was closed to the inferior end where a cigarette drain was left. Probing in all directions disclosed no pus pocket in swelling.

During the next five days the condition of the patient remained about the same. Temperature ranged from 101 to 104. Pulse rate from 120 to 140. Swelling of neck and jaw did not recede. White cell count increased. The ear was frequently irrigated with Dakin's solution. The discharge from the mastoid incision never became pustular.

IV

Twentieth day—July. 8. A deep incision is made 1 inch anterior to the angle of the jaw, and 1 inch long parallel to ramus of mandible. A large amount of thick creamy pus is extruded. A smear and culture shows a pure strain of staphylococci. Irrigation with Dakin's solution

discloses a communication between the external auditory meatus of the right ear and pus pocket.

Twenty-first day—July 9. A large swelling is noticed in the left axilla, similar to an enlarged lymph gland, about the size of a hen's egg. Incision revealed a large amount of thick, creamy pus. Smear and culture shows a pure strain of staphylococci.

Twenty-third day—July 11. A large swelling is found over the prominent portion of the sacrum in the mid line. Incision reveals 500 Cc. of thick, creamy pus. Smear and culture show pure strain of staphylococci.

Twenty-fourth day—July 12. Temperature and pulse rate gradually decreasing. Max. T. P. R. 100.5—100—26. Patient becoming more quiet.

Twenty-fifth day—July 13. Mental condition is improving. Speaks rationally. Pus still discharging from right ear and wound on cheek.

Twenty-sixth day—July 14. Patient sleeps most of time without narcotics. Has lost very much weight.

Twenty-eighth day—July 16. Discharge from ear becomes serous. Patient very much improved. Max. T. P. R. 98.5—80—22. Wheel chair.

Thirty-first day—July 19. Patient walking—is very unstable and must be assisted.

Thirty-fifth day—July 23. Patient released from hospital.

Patient returned to hospital for dressing at frequent intervals, until August 10, at which time all wounds were healed, his hearing was good, and patient was normal physically and mentally, except it be for a slight mental aberration.

THE PHYSICIAN

PATHIES, ISMS AND CULTS IN MEDICINE*

By
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With the march of progress in scientific medicine has come organization, not merely for the promotion of medical knowledge, but as well to improve the economic and moral status of the profession. The traditions of medical idealism have fostered the spirit of brotherhood in knowledge as well as promoted cooperation toward higher standards and greater usefulness of the profession. This tendency to organization in the field of medicine is not unlike that which has occurred in religious, social and political movements.

As any great movement gains momentum, influence and power, errors creep in and acquire respectability because approved and supported by the organized mass. Tilling the soil and planting the seed bring to fruition the choicest flowers and the finest grain, but what crop is free from tares which should be plucked out and destroyed? Religion has its bigotry, politics its corruption or autocracy, society its prejudices and ostracisms, and even scientific movements may become permeated by a meshwork of self-sufficiency and arrogant exclusiveness. If medical evolution be studied in the light of this idea, it will be found that the profession at one time has been led into errors of excess by prevailing fashions; or again its established practices and traditional prejudices have made blind the vision for new truth. Organized medicine has at times been Phariseeical and refused to see good in men or things outside its own household. Upon Pathies, Isms and Cults we look with that supreme disdain which utterly condemns. Our attitude toward them, instead of crushing or minimizing their influence, only establishes them in a position of respectability in the public mind. We are suspected of persecutory conduct. Erratic sects which we have ridiculed and condemned to an early death have lived on and flourished to nation-wide influence and power.

The type here under discussion comprises a following of greater or less extent, claiming superior virtue for some new method of treatment at variance with the established medical usage. Most of the advocates believe in the doctrine promulgated. The very fact of newness alleged, has its appeal, of course, to the popular fancy—a fact seized upon by the mercenary and unscrupulous. The latter assume an air of superiority and progress most offensive to the physician of broad training and fair mind. They refer to the organized forces of medicine derisively, as belonging to "the old school", with an inflection insinuating reactionary and abandoned methods of practice, whilst "the new school" stands for the most advanced achievement of science and progress.

The way of modern medical education is long and irksome; the expense very great. The physician thus trained and equipped is justified in guarding jealously the rights and privileges of his attainment. Having spent toilsome and tedious years in scientific fundamentals and clinical preparation, is it to be wondered that he looks askance at those who by short-cuts, a brief period of superficial preparation, parade themselves as competent to understand the human body, well or sick. For example they may assume to cure all the complex and widely distributed alterations of its mechanism by the so-called adjustment of a spinal vertebra. A master plumber before recognition as such, must spend two or three years as an apprentice. A locomotive fireman devotes years to observing

*Thirteenth of a series of articles by Dr. Wynn which will appear regularly in THE JOURNAL.

the work of the engineer before he is promoted to the rank of the latter. How much more therefore should one prepare himself if he would assume to understand the most complex machine known to mankind—the human body. To assume responsibility for its care and direction without adequate preparation is the act of a pretender, whose motives are dominated by ignorance or prompted by avarice.

For attempting to elevate and standardize the conditions of medical education and practice, organized medicine has been villified, pointed to as reactionary and persecutory, and stigmatized as a medical trust bent upon cornering and strangling younger medical methods. A study of its history will show that the motives animating its evolution have been just, wise and philanthropic; concerned more in the interest of mankind in general, than the aggrandizement of the profession. But however lofty the aims or however great the total benefits, the purpose of the present article is to point out more particularly the inherent errors, most of all the prejudices which are the natural outgrowth of organized medicine. The conservatism of long usage and the consciousness of past achievement make us morally astigmatic and unable to see virtue outside the fold of regular medicine. As with those of old, we are likely to say of these sects, "Can anything good come out of medical Nazareth?" However preposterous the claims or chimerical the doctrines of medical heretics, careful study will show that some of them at any rate advocated theories and measures which in the end were acknowledged as beneficial to medical practice. Our failure in the beginning to recognize virtue in the theories advanced, led to systematic organization in protest and so the development of a sect.

In proof of the contention here made it is proposed to discuss only a few of the medical sects which have attained distinction and influence. The most ancient and respected of these coming down to our own day is homeopathy, founded by Hahnemann. He was a skilled chemist who did highly creditable work in that field. He discovered a soluble salt of mercury which is used even at the present day. That he disapproved of the polypharmacy of his time is indicated by this quotation from his writings in 1800: "Dare I confess that for many years I have never prescribed but a single medicine at one time?" Then came his specific medication with its minimal dosage. Elegant pharmacy, the palatable little pills resulted, which was an agreeable change from the nauseous compounds and large doses of polypharmacy. Homeopathy grew and flourished chiefly because the public looked upon it as a break away from the conservative traditions and practices; still more because it stood for simplicity and palatability in the remedy employed instead of the bulky, nauseous compounds. Mothers favored homeopathy because the children took the little pills without complaint. These needed reforms, and not the chimerical doctrine, *similia similibus curantur*, enunciated by Hahnemann, are what gave virility and continued growth to the movement he inaugurated.

After over a century of existence the good there is in homeopathy is now being recognized by regular, organized medicine. Those who formerly marched under a sectarian banner are now welcomed to our medical societies, professional counsels and personal friendships. The tardy recognition of Hahnemann's real service to medicine was due to his erratic conduct and vainglorious attempt to establish a "New System of Medicine" upsetting all previous knowledge and practice. His was "the only true system" he wrote. History will record that his contribution to medicine consisted in the fact that in his day he was chief protestant against the nauseating compounds of polypharmacy, as well as the vigorous exponent of simplicity in medication, including reduced dosage.

During the same period that homeopathy was developing in Europe and spreading to this continent, two other medical sects arose in America—Eclecticism and Physiomedicalism. The former as may be inferred from the name, whilst advocating the abandonment of set formulæ in practice and urging individual election of whatever is best in the treatment of disease, in reality bound itself to restricted methods of practice. Its followers advocated largely the use of botanical remedies—hence in the earlier days were called herbalists. And even to the present time, its conscientious advocates rely chiefly in practice upon so-called specific botanical products.

Physiomedicalism under the aggressive leadership of its founder Thomson, like eclecticism, stressed the use of herbal products, making great claims for the specific value of lobelia and the usefulness of hot vapor in the treatment of disease. From the latter fact they were often referred to as "steam doctors".

Both of these sects grew, not so much from their scientific contributions as the fact that they stood for protest against supposed as well as real abuses in the general medical practice of the day. However valuable may have been mercury, opium and venesection as therapeutic measures, there is no doubt but the general profession had gotten into a rut of routine in their excessive use. Ptyalism and narcotic habits were too often the result; and phlebotomy no doubt was often needlessly if not harmfully performed. Hence public sentiment was ripened to protest against the prevailing abuses of medical practice. In this atmosphere homeopathy, eclecticism and physiomedicalism flourished. As the

causes for their origin and growth have been eliminated, and the fundamental scientific standards underlying medical education have been advanced, these sects no longer find cohesive foundation for continued existence. They have become merged in the larger army of medical practitioners.

The medical sects arising in our own day and generation are quite different, except that like their predecessors all relate to therapy. In a previous essay consideration was given to manual therapy as advocated by osteopathy and chiropractic. The former has justifiable ground for existence as a protest against the failure of medical education to properly instruct students in the methods of manual therapeutics. In the case of chiropractic this is very much less true since the whole plan of relief promised for a wide range of maladies is based upon so-called spinal adjustments. Whatever virtue there may be in the method for the relief of a limited number of conditions is clouded by the brazen and extravagant claims made of applicability to a wide range of lesions, remote and unrelated to the spine. If persons of broad general education and thorough grounding in the fundamentals of medicine, as vouched for by well recognized universities and state boards of medical registration, choose to limit themselves in treatment to chiropractic methods, there should be no objection on the part of the stable, organized forces of medicine. This is fair, wise and in the interest of the public good, insuring against the practice of quackery under a new name. Then no matter what the method employed the practitioner should not err from ignorance of what he is treating; nor will he be so likely to yield to the avaricious methods of the charlatan.

The greatest of all modern medical sins of omission I reserve for last. As to its name and magnitude, let the numerical and material triumphs of Christian Science answer. The magnificent temples reared in most cities are packed with somewhat vainly-dressed devotees, proclaiming in the same breath the failure of medicine and the triumphs (imaginary or real) of a medico-religious cult.

This has all come to pass before our very eyes and in spite of our ridicule. To how many physicians has it occurred that we have brought this condemnation upon ourselves? The whole movement of Christian Science is a natural protest against the materialistic trend of modern medicine. For forty odd years the hue and cry of advancing medicine has been for a sign, a demonstration—in physiology, chemistry, pathology, and bacteriology; find the micro-organism and prove its relationship to the disease; locate the lesion and ablate it by the knife—always a material enemy to be subdued by material means. And it must be granted that this scientific, if materialistic, method has brought to medicine its greatest glories in modern times. So intent upon demonstrable scientific achievements, the profession has not seen or properly evaluated the mental and moral factors in the cause and cure of disease. In years gone by the general practitioner was an artist in the practical application of these principles. But with the advent of specialism dividing the human body into a multiplicity of departments, to be treated in a cold, mechanical way, the practitioner lost sight of the co-ordinated, pulsing, reacting organism as a whole. Medical practice, like the practitioner, lost its soul and spirit to the tyranny of materialism. Cases in which mental treatment or spiritual ministration was indicated were still treated by material means resulting in failure, which condemned the methods employed and fed the growth of a cult. Healing through the mind, or through benignant moral or spiritual influences became a lost art. Out of the ruins of our failure a medico-religious cult has builded its temples and inculcated its teachings. Nor can it be denied that many of the followers of Christian Science have been greatly blessed and made well; just as it is equally true that many have been grossly deceived. In fact not a few are carried over the Niagara of destruction when they might have been rescued in the life-boat of scientific medicine.

A comparison of the true physician's attitude and that of the Christian Scientist toward the human body and its ailments offers some interesting contrasts. To the former the human body is a sacred temple, the handiwork of the Creator, with the organs and parts correlated and endowed with consciousness through the five senses—nerves carrying messages from without and within the body for our enlightenment and protection. It is not for us as finite creatures to say one sense is better than another —all of them enter into the program of life, to be respected and obeyed. Rarely do they deceive us. To question their mandates is to challenge the intelligence and character of deity. Through the sense of sight an approaching railway train calls us to halt lest we be hurled to destruction. A listening ear warns us of an oncoming tornado, and we seek the safety of a cellar. The fumes and smoke of a burning building arouse us from slumber in time to escape in safety. A finger accidentally touching the fire telegraphs a pain message insuring immediate removal. Thus always the benignant senses are working for us. To single out one of these and call it an evil impulse, an error, is to mock God. Yet this is exactly what Christian Science does.

The physician's viewpoint then is that the

pain sense is an all-wise provision for our protection—a danger signal that something is wrong which should be corrected. Through its warning messages we are made aware of dangers within, whether it be appendicitis, peritonitis, gallstones, bowel obstruction, beginning pneumonia, mastoid disease, brain tumor or a thousand other organic abnormalities. Yet Christian Science would place the stigma of an evil impulse upon pain, and deny it a hearing as a protective attribute of life. Medicine on the other hand listens reverently to its warnings and seeks to avoid or neutralize the impending danger.

The Christian Science attitude toward pain is both irreverent toward deity and characterized by a dishonest and demoralizing complex of pretensions. Instead of frankly admitting pain, but bearing it with heroic fortitude, they audaciously distort the truth. Every word and act must support the dogma, that pain, physical or mental, has no real existence. The true devotee dares not confess to himself or others the possibility of pain. The result is that deception, conscious or unconscious, becomes with them the almost universal practice. It may be a successful psychological method of helping to endure suffering, but it is misrepresenting the truth nevertheless.

To prove that their conduct is such, one needs but to attend a Wednesday night experience meeting; or scan the testimonials of any Christian Science paper. Hide-bound political papers are partisan and prejudiced enough in their expressions, but bear only mild comparison to Christian Scientist journals. Their public reports of treatment are universally favorable—no other would be acceptable. They read like the testimonials of a quack doctor. If someone arose in open meeting honestly acknowledging failure of "Science", such would be *persona non grata*. Would any healer have the honesty or courage to admit failure of the dogma amongst his clientele—for example in cases of uremic and diabetic intoxication; from typhoid fever and tuberculosis; from organic nervous diseases, cancer and sarcoma; from the malignant infectious diseases of infancy and childhood, such as diphtheria and scarlet fever? Duplicating the experience of almost every general practitioner, I have been called to cases of these disorders when *in extremis*, in whom "Science" was given a chance and failed ignominiously. Contrast the Christian Science attitude with that of a group of medical men assembled in discussion of cases. The conscientious physician is just as faithful in reporting his failures as his successes. Any other attitude on his part would be viewed with suspicion which would visit upon him merited condemnation.

Besides inculcating the habit of prevarication Christian Science fosters another moral delinquency—the hardening of the heart toward the unfortunate. It robs life of its sympathetic touch. It takes the very essence out of the teaching of the Great Physician. Has Christian Science ever founded a hospital for unthinking little children incapable of comprehending dogma? Or has it volunteered sympathetic mercy or generous support to that great company of the afflicted who are down and out in the life struggle—not so much from evil intent as from heredity, environment or the scourge of infectious diseases, as real and as terrible as fire or flood?

In no particular is Christian Science so inconsistent in conduct or reprehensible in action, as in its repudiation of organic diseases, especially the infectious maladies, acute and chronic. The devout "Scientist" dusts Paris green upon potato plants to kill beetles, sprays rosebushes to destroy slugs, and sorts rotten apples out of the barrel, knowing that a few bad ones will soon contaminate the whole mass. Meat and butter are kept in the ice-chest to inhibit germ growth. The jars and fruit are boiled before canning, to destroy bacterial growth. Had the mind of the potato, the rose-bush or the fruit fallen into "error" or were they being preyed upon by parasites, which it should become the highest duty of man to learn about through true science, and combat by intelligent means? Or turning to the lower animal kingdom, does the devotee of this cult condemn the mind of the dog for having fleas; or will recourse be had to insect powder? When did the minds of swine fall into error that they should die of plague? These homely if forceful illustrations are given to make plain what is true of most Christian Scientists, namely, that in the disorders of lower animals and vegetable life, they follow the dictates of reason and common sense; but when it comes to the ills of human kind, they shut their eyes to facts.

The writer's experience with cases in illustration of the point may be duplicated again and again in the practice of others. I came once into a family where one child lay dead of diphtheria and two others were in dying condition —innocent victims of a misguided belief. Repeatedly I have been called to patients, *in extremis*, suffering from toxic convulsions, uremic or diabetic coma—conditions in which by proper regulation life might have been prolonged if not a cure effected. Innumerable are the cases of pulmonary tuberculosis who have been told to go their way, chasing the fatuous hope of a dogma, frittering away golden time when by intelligent management disease might be

arrested—dallying until hectic fever and weakness overwhelm them. Almost daily I pass upon the street a man who wears a disfiguring shield over a ghastly opening where his nose should be—a horrifying testimonial to the failure of "Science"—once an ulcerative, destructive lesion which I saw heal in three weeks' time under the administration of iodides. What practitioner has not seen the woman with mammary cancer deluded by the promises of this erratic belief until metastases had converted a curable into a hopeless condition?

Opposed to organic diseases are the functional group. All intelligent physicians will admit that many stresses of mind and spirit beget most uncomfortable states of existence—with various organs awry in their functioning capacity. What mental equilibrium is so stable as to be undisturbed by the sudden death of a very dear relative, the discovery that a trusted friend has proved false, the collapse of one's business or the failure of a pet ambition? Let these impulses of assault on the sensorium be multiplied and repeated indefinitely in harrassing succession. There results a short-circuiting in the mental exchange, wrong messages and explosions which produce disturbed action of various organs. These constitute functional diseases, and their relief must be obtained largely through mental, moral and spiritual agencies. Here is where Christian Science finds a legitimate opportunity. In such cases it often does afford relief. Let us frankly acknowledge the truth, giving credit where credit is due. In fact, does not growth of this sectarian organization represent a protest against our sins of omission? The very brilliancy of the revelations of modern pathology with their vast bearing upon surgery and medicine, has blinded the profession to the significance of the mental, moral and spiritual factors in the cause and cure of disease. Here is where medicine needs an awakening if it would prevent Christian Science from taking over a neglected field.

On the other hand, to the votaries of this medico-religious sect who assume to cure organic or infectious diseases, we should give no quarter. Highest duty calls for exposures of such fallacies, not so much by vituperative attack as by kind and sympathetic reasoning. In seeking to make plain the danger of the dogma, let us not ourselves become bigots. On the contrary it is a false reserve upon our part to excuse their dallying with organic, notably the infectious diseases. If mankind were to follow the dictum of Christian Science in ignoring natural phenomena or symptoms of disease, one may pertinently ask, why should we strive to discover *any* of the hidden truths of Nature? Has it availed nothing for civilization that Franklin brought down the lightning from the clouds; that Morse refined and applied this knowledge in the electric telegraph; that Edison through study and investigation made it do the practical function of illumination? Is it any less a proved scientific demonstration that Koch discovered the cause of tuberculosis; that Morton and Simpson proved the practical value of chloroform and ether as anesthetics relieving pain; that Biehring in diphtheria antitoxin perfected a cure for that dread disease of childhood? Are not all of these revelations from the Creator's book of Nature? If scientific truth is not to be trusted in medicine, why not deny it credence in all other fields? If the whole world accepted and practiced the dominating thought of this cult, it would lead inevitaly back to the ignorance and barbarism of the primitive races.

So long as Christian Science confines its activities to a cheerful optimism which does not ignore aching hearts, or forget the touch of human sympathy for those in pain, poverty or sorrow; when it counsels fortitude to bear pain and suffering without practicing deception about them; when by earnest prayer, heartening words and deeds, it inspires the depressed and discouraged to hope, faith and resolution; when it distinguishes between organic and functional disorders, limiting its activities largely to the latter—when Christian Science performs these kindly ministrations, without money and without price, untainted by selfishness or the suspicion of commercialism—medicine has no quarrel with it. In this role, like any other religious sect which has won a place in the world's confidence it should continue to survive and flourish.

A few medical men are capable of handling the delicate questions relating to the mental, moral and spiritual phases of disease with infinite tact; more are inclined to shirk the responsibility, turning it aside with bluff words or silent contempt. To be able to treat them with success often requires the gift of spiritual insight. the finest wisdom and the most inspiring courage—accomplishments more difficult to acquire than the writing of prescriptions or the wielding of the knife. Shall we not more frequently cultivate the science and art of psychology as applied to medical practice? Is it without the province of opportunity and duty in the art of healing for the physician to bring to his aid the stimulating and uplifting effects of religion. if this will help the sufferer? If not ourselves able to instill calm and hope into a perturbed soul, should we not more frequently counsel those who by prayer or inspirational contact can arouse wholesome reactions of the spirit—bringing about functional and organic improvement? By so doing we shall fulfill to a higher degree the ideals of a well-rounded professional achievement and avoid the excuse for the development of medico-religious cults.

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EDITORIALS

THE STATUS OF VACCINATION AGAINST INFLUENZA

Prophylactic vaccination against influenza was practiced extensively during, but mostly following, the recent epidemic of the disease. From a scientific point of view, such inoculation seems somewhat premature, since the etiologic factors are not established. In some districts stock cultures were employed; in others a culture of a strain or strains isolated during the epidemic, and in still others a mixed vaccine composed of the bacillus of Pfeiffer, the streptococcus, the pneumococcus, the staphylococcus and other organisms. McCoy presented his impression, as gained from the uncontrolled use of these vaccines, that while theoretically they might be of value in the prevention of influenza, yet in every case in which they were tried under perfectly controlled conditions they failed to influence either morbidity or mortality. A well conducted investigation is worthy of note even when the outcome is negative in character. It may turn us away from false hopes and force us to seek new solutions for the problem at hand. In an elaborate study, Jordan and Sharp of the Department of Hygiene at the University of Chicago conducted observations under the auspices of the influenza commission established by the Metropolitan Life Insurance Company of New York on approximately 6,000 persons from November, 1919, to June, 1920. About one-half of these were vaccinated with a saline suspension of a standard mixed vaccine prepared by Dr. W. H. Park of the New York City health department. The remaining half were not vaccinated. Comparable members of the two groups in different localities lived under essentially identical environmental conditions. The influenza attacks among the vaccinated numbered 118, or 4.1 percent; among the unvaccinated the morbidity from this disease was 4.8 percent. Rhinitis and bronchitis developed with about equal frequency in the two groups. There were slight variations in the incidence of the few cases of pneumonia, but the Chicago bacteriologists regard it as unlikely that any considerable degree of protection against influenza was conferred. Is it unfair to the proponents of vaccination against influenza and other respiratory infections to say: "Value unproven"?—*Jour. A. M. A.*, May 28, 1921.

PHYSICAL EXERCISE FOR THE PROFESSIONAL OR BUSINESS MAN

Physicians as a class are not infrequently the target of public criticism. This is not necessarily an uncomplimentary attitude and often means quite the reverse. The greater the responsibility and the closer the touch to public welfare an individual or an institution maintains, the more critical the public becomes of its activities. Hence, the barber or the plumber is seldom disturbed in the discharge of his duties by the clamor of public criticism. On the other hand, the community expects a great deal from their doctors, and if a doctor sometimes fails to measure up to their ideal of usefulness, as no doubt he often does, he should not be piqued by their criticism, but rather diligently search for the cause of his failure and remedy his defects. Among other things doctors have been accused of entertaining a very narrow point of view, not only in relation to the problems of individual life but to community life. The ills of mankind occupy the entire field of the doctor's vision, so it is said, to the exclusion of many closely related activities and interests of his fellow men.

About a year ago, one of our professional friends became personally very much interested in the question of physical exercise. He had been operated only recently for a condition which he strongly believes had been brought about by a lack of adequate physical exercise. Having, during his convalescence, plenty of time and a good opportunity to evaluate his physical assets, he arrived at the conclusion that he had been almost criminally negligent of a very fundamental and prime essential to good health. He made up his mind that the triad of physical liabilities—too many calories of food, too much tobacco and sedentary habits, under which he had been laboring, should be liquidated at least partially. We say partially, because he still smokes, but he joined a good athletic club, and ever since has been reaping the benefit in an improved physical condition which almost spells rejuvenation. It is his firm belief that his experience parallels that of a great many men who have arrived at the fourth decade of life, men who live in our cities and whose work keeps them in the office or at the desk the entire day.

Adequate physical exercise cannot be regarded as a necessity to existence, like oxygen or water—perhaps it is unfortunate that it is not, since it would not be so neglected. One does not have to paint his house or mow his lawn

in order to live in a fair degree of comfort, but he will do both if he realizes the full value of his property.

The "tired business man" is no myth. His number is legion. If he did not constitute a large class in urban society, patent medicine vendors would not be so constantly appealing to him. What he needs is not less work but more work—physical work—something that will empty lymph spaces of stagnant fluid that fails to properly nourish his cells.

There are three kinds of exercise available for the business man whose daily duties do not afford him sufficient muscular work. Exercise in which he at the same time is accomplishing some useful occupation, such as gardening, taking care of his premises, his automobile, etc. There is much to be said for this, especially in such a crisis as the world is just now passing through. This kind of exercise is not attractive to the average business man. He does it, if at all, from purely economic motives, when, as a matter of fact, the greatest benefit he derives is its excellent effect upon his health.

Another kind of exercise is that obtained by engaging in competitive games or sport, such as golf, tennis, etc. This appeals to every normal man. It must not be forgotten, however, that the real object of the game is not the winning but its playing. The man who is beaten gets just as much out of it from a health standpoint as the one who wins. For those who must have their exercise served with sugar to make it sufficiently palatable to masticate, competitive sports are a great boon.

And, finally, we have exercise unadulterated, with no other object than the workout. This is afforded either by individual effort in the home, or attendance on gymnasium classes in athletic clubs. This, we believe, is an absolute necessity, especially during the winter months, if the business man of 35 to 55 years is to keep himself in good physical trim. This kind of work is ideally suited for men of this age. The aim is to bring into moderate activity large groups of unused muscles, rather than sudden and violent use of smaller and more frequently used groups. The objection to this type of exercise is that it is not particularly interesting, and it requires a degree of self discipline in faithful and regular performance that the average man seems unequal to—perhaps in the interests of brevity and truth, one might say he is too lazy.

Broadly speaking, doctors are interested in the development of a strong and vigorous race. They are the only class in the community who have the educational basis to understand the fundamentals whereby this can be accomplished. And yet it is safe to say they have not interested themselves in the question of physical education. A recent inquiry of thirty (30) active members of gymnasium classes revealed that only three (3) had undertaken the work on the advice or suggestion of a physician. The business men who comprise these classes have but one object in view when they undertake this work and that is health conservation. The medical profession, which they have a right to expect to assume leadership in all questions affecting the health of the community, has had but little to do in directing them in this extremely important matter of physical education.

THE SHEPPARD-TOWNER BILL

The Sheppard-Towner bill, as amended, now provides for the appropriation of $1,480,000; $10,000 is to be paid to each state, and $1,000,000 is to be apportioned among the states in proportion to their population, no part of the prorated amount to be paid until an equal sum shall have been appropriated by the legislature of the state for the purposes provided for in the act. The Children's Bureau is made responsible for the administration of the act; the chief of the Children's Bureau is directed to form an advisory committee consisting of the Secretary of Agriculture, the Surgeon General of the United States Public Health Service and the United States Commissioner of Education. Not more than 3 percent of the total appropriation may be used for administration expenses. Any state desiring to avail itself of the benefits of the act must submit to the Children's Bureau a detailed plan for instruction in the hygiene of maternity and infancy through public health nurses, concentration centers and other suitable methods. To meet the objections of the advocates of personal liberty, an amendment provides that no state official or agent or any of the employees of the Children's Bureau shall have the right to enter any home over the objection of the parents. The Senate Committee on Education and Labor on May 20 reported favorably on the bill as amended, the report being practically the same as the report of the Senate committee on the same bill in the last session of Congress, and repeats the statement that the United States stands seventeenth among civilized nations in the maternal death rate, and that most of this loss could be prevented by proper prenatal instruction.

As already stated in previous issues of THE JOURNAL, we are opposed to the Sheppard-Towner bill, and except for a few spasmodic efforts here and there among medical men, there has been little support of the Sheppard-Towner bill from the medical profession. In fact the medical profession as a whole probably is opposed to the bill, and for the reasons already

stated in *The Journal of the A. M. A.*, which are as follows:

(1) The principal of federal state aid as a means of financing public health work is an unsound financial policy.

(2) Public health work, except those activities which are clearly national in character, is essentially a function of the state and local government and should be paid for out of state and local funds.

(3) No such emergency exists as has been claimed and there are no reliable statistics by which it can be proved that the United States stands seventeenth in maternal death rate.

(4) The means provided in the bill will not afford an effective remedy for existing conditions.

(5) Most important, if the federal government intends to inaugurate activities for the care of maternity and infancy, or for any other public health measures, such work should be placed in the hands of the United States Public Health Service rather than under a bureau of the Department of Labor.

NATIONAL HOSPITAL DAY IN INDIANA

The first observance of National Hospital Day exceeded even the fondest hopes of the most enthusiastic committeemen. Never before was hospital service brought before the public in such an interesting way and with such force. According to reports which we are now receiving, the observance of the day was quite general in Indiana as well as throughout the United States and several provinces in Canada. Forty-eight States and five Canadian Provinces were actively organized in promoting the observance of the occasion. Hospital executives are unanimous in the opinion that the idea of National Hospital Day is a splendid one and that the project should be perpetuated. It is felt that National Hospital Day offers a splendid means of arousing the public interest in hospitals in the work they are doing by encouraging the general public to visit institutions at a particular time. It is realized that the focus of public attention on hospitals at a particular time will result in many persons visiting hospitals and becoming interested in hospital activities who otherwise could not be reached.

Many reports have been received from over the State regarding the observance of the day.

At the National Home for Disabled Volunteer Soldiers, Marion, Indiana, the hospital authorities report Hospital Day was exceedingly pleasant and satisfactory; approximately five hundred people from Marion and surrounding districts visited the hospital. The authorities of the hospital are enthusiastic over the possibilities of National Hospital Day and encourage the perpetual observance of the occasion.

The King's Daughters Hospital of Madison reports National Hospital Day was well observed by the town people; so much that officials are heartily in favor of making it an annual occasion.

The Wells County Hospital states that a splendid response was had at Bluffton.

The San Antonio Hospital at Gary indicates that hundreds of persons visited their institution during the day and that a program of demonstrations was given as a part of the observance; also the Illinois Steel Company Hospital at Gary joined in the movement.

The Bedford Hospital observed the day by carrying out a very interesting program of demonstrations, served refreshments and gave favors to visitors who numbered several hundred. Volunteer offerings were received by the hospital, both in cash and canned fruits and vegetables.

St. Edward's Hospital at New Albany reports that the general public responded very enthusiastically. The hospital was assisted by the Ladies' Auxiliary in receiving visitors and conducting them to various parts of the hospital. They urge that Hospital Day again be observed in 1922.

The Methodist Hospital in Fort Wayne observed the day in a very auspicious manner.

The St. Joseph's Hospital, Fort Wayne, held open house to several hundred callers, and gave out souvenir booklets illustrated with hospital views, photographs of the staff members and giving a history of the hospital.

The Fort Wayne Lutheran Hospital threw open the doors at the Hospital and Nurses' Home, and report that large numbers visited the institution. In the evening a musical program was given at the Nurses' Home. The hospital issued folders which were distributed to all visitors there.

The Good Samaritan Hospital at Kokomo reports a splendid response to the occasion and states that the observance of the day was of great benefit in arousing the interest of High School girls in the Training School of the hospital. A committee of ladies assisted the hospital, both in cash and canned fruits and vege-

The Hamilton County Hospital issued cards of greeting and served refreshments to the guests and reports that in spite of rain had a very good crowd.

The Holy Family Hospital at LaPorte considers the day a huge success; several hundred people visited the institution and were given a clear insight into the work of the hospital.

The St. Joseph's Hospital at Mishawaka observed the occasion by distributing pamphlets on "Nursing" and "Hospital Work" and showing several hundred visitors through the institution. The annual dance of the nurses was

held as a part of the observance of the day to which the public was invited.

In Terre Haute both the Union and St. Anthony's Hospitals drew large crowds of visitors. At St. Anthony's the Nurses, Sisters and Staff had a parade about the building and grounds which attracted considerable attention and in the evening the Nurses held a reception. At the Union Hospital many girls of the graduating classes of the different High Schools in Terre Haute attended demonstrations given by the Nurses. Refreshments were served and the hospital authorities feel that great interest was aroused which will eventuate in many additional applications for the training school.

In Lafayette the day was observed at both the Home and St. Elizabeth Hospitals and several hundred visitors took advantage of the occasion and visited the hospitals. The St. Elizabeth Hospital issued a pamphlet describing the work being done by the hospital. Both hospitals are enthusiastic as to the possibilities of National Hospital Day as a permanent institution.

The St. Joseph Hospital at Logansport considers National Hospital Day a big success; the Advisory Committee of the hospital and the ladies of the hospital sewing circle acted as a reception committee in showing visitors through the hospital. The occasion at Logansport was given considerable impetus by a proclamation of Mayor James I. Barnes for National Hospital Day.

In Indianapolis hundreds of visitors were shown through the various hospitals; the occasion was observed very successfully at the Methodist, St. Vincent's, Deaconess, City and Robert W. Long Hospitals. The Sunnyside Sanatorium held a special program for a large group of Public Health Nurses who visited the institution as a part of the program of the State meeting of the Association of the Public Health Nurses. The Staff of the Robert W. Long Hospital was very enthusiastic over the large response of the general public in visiting the institution. The students of the training school gave a play during the evening portraying the various phases of the training of a nurse. This entertainment was open to the general public.

Many other hospitals observed the day and all feel that bigger and better observances of National Hospital Day can be held next year.

Following is a list of the State Committee for Indiana, whose efforts brought about such a wide and enthusiastic observance of the day in this state:

ROBERT E. NEFF, Administrator Robert W. Long Hospital—State Chairman.

LEMUEL BOLLES, National Adjutant, American Legion, Indianapolis.

AMOS W. BUTLER, Secretary Board of State Charities, Indianapolis.

DR. W. L. BRYAN, President Indiana University, Bloomington.

DR. CHAS. N. COMBS, Superintendent Union Hospital, Terre Haute.

DAVID E. COX, President Board of Trustees, Randolph County Hospital, Winchester.

DR. W. H. DAVIDSON, Walker Hospital, Evansville.

WM. FORTUNE, Chairman Indianapolis Chapter, American Red Cross, Indianapolis.

DR. ALFRED HENRY, President Board of Control, Sunnyside Sanitorium, Indianapolis.

DR. EDNA G. HENRY, Director Social Service Department, Indiana University, Indianapolis.

DR. JOHN N. HURTY, Secretary State Board of Health, Indianapolis.

WILL G. IRWIN, Bartholomew County Hospital, Columbus.

DR. GEO. F. KEIPER, St. Elizabeth's Hospital, Lafayette.

HUGH MCK. LANDON, Vice Chairman, Joint Committee James Whitcomb Riley Association and Board of Trustees Indiana University, Indianapolis.

MISS MARY A. MEYERS, President Indiana State Nurses' Association, Indianapolis.

DR. T. W. MOORHEAD, St. Anthony's Hospital, Terre Haute.

DR. WM. MCLAKE, Medical Director and Supt., National Home for Disabled Volunteer Soldiers, Marion.

WALTER E. PITTSFORD, Governor Rotary Clubs of Indiana, Indianapolis.

DR. MILES F. PORTER, St. Joseph's Hospital, Fort Wayne.

JOSEPH REITEMEIER, Chairman Advisory Board, St. Joseph's Hospital, Logansport.

MRS. E. C. RUMPLER, President Indiana State Federation of Clubs, Indianapolis.

DR. DAVID ROSS, President Indiana State Medical Association, Indianapolis.

JOHN L. RUPE, President Board of Trustees, Reid Memorial Hospital, Richmond.

B. M. SMITH, Superintendent Muncie Home Hospital, Muncie.

MRS. MARCUS R. SULTZER, The King's Daughters Hospital, Madison.

DR. H. J. WHITE, Chairman Executive Committee, St. Margaret's Hospital, Hammond.

EDITH G. WILLIS, Supt., Good Samaritan Hospital, Vincennes.

DR. CHAS. S. WOODS, Supt., Methodist Episcopal Hospitals of Indiana, Indianapolis.

EDITORIAL NOTES

THE action of the House of Delegates of the Ohio State Medical Association, in accepting the recommendation of the retiring president that the medical profession put aside its conservative policy and utilize the press to the fullest possible extent in teaching the people the things they ought to know about their life and health, shows that the medical profession is awakening to its responsibility. Many pseudo medical cults are utilizing the public press extensively in the publication of glaring, misleading statements concerning the human body in sickness and health, and the medical profession has rested complacently on its ethical conservatism without giving to the public the truth. It is about time that the medical profession arises to its responsibility.

INVESTIGATION carried on at the Leland Stanford Medical School by Dr. J. H. Mehrtens, aided by an appropriation from the Scientific Research Fund of the U. S. Interdepartmental Social Hygiene Board—a report of which was published in *The Journal of the A. M. A.*, February 26, 1921—has shown that much larger doses of neo-arsphenamine may be tolerated when given intrarectally than was heretofore considered safe. These massive doses produce greater amounts of arsenic in the blood, and cause arsenic to remain in the blood over a longer period, than does the intravenous method of administration. These investigators still advocate the intravenous injections as the method of choice, and suggest that the intrarectal route be substituted when for any reason intravenous administrations may be contraindicated.

DESPITE all of the careful investigations concerning the use of stock vaccines in the treatment of various sub-acute and chronic affections, conducted under suitable checks, many members of the medical profession continue to believe the exaggerated and misleading claims put forth by manufacturers who are quite willing to distort the truth for financial gain. The trouble with the manufacturers is that they are troubled with mental astigmatism in that they are not inclined to see anything outside of the axis which offers distinct advantage to themselves. We are very well satisfied that there is much merit in autogenous vaccines, intelligently used, but we are decidedly opposed to the practice of those doctors who railroad their patients into receiving stock vaccines for so many of the ills for which manufacturers claim that stock vaccines are indicated.

WE are informed that the Indiana State Board of Health has advised the various municipal and county boards of health in Indiana that in microscopically examining a smear from a culture taken from a suspected diphtheretic throat, if one diphtheria bacillus is found in the field, the case should be called diphtheria, and, by inference, we suppose that this means that the suspected case must be quarantined. If the State Board of Health sticks to this ruling, there are going to be a lot of cases quarantined that are not suffering from diphtheria and under no consideration could be considered as disease carriers. Furthermore, we may say that if the State Board of Health is going to quarantine every patient from whose throat a single diphtheria bacillus could be found, it would be necessary to quarantine four-fifths of the people in every city and town in the state if all the people were examined bacteriologically. With all due respect to the findings of the laboratory, we believe that the clinical manifestations should be given due consideration.

A GREAT many of the Utopian ideas of the uplifters and reformers are accepted by people when only one side of the story is heard, or, in other words, until the ideas have been thoroughly analyzed. This is especially true of all the arguments put forth for compulsory health insurance and state medicine in whatever guise they are offered. The unfortunate phase of the situation is that a few medical men, in some instances prominent in the medical profession, have become advocates of these schemes for furnishing health insurance and medical and surgical care with little or no expense. When we come to consider the reasons why these medical men have fallen in with false gods, we readily discover that they have nothing to lose by such a stand. In fact they seem to be courting the publicity or even the notoriety attached to the position of sponsor for Utopian and impractical ideas. We hope that none of the rank and file of the medical profession will be led astray by the specious arguments of these erstwhile leaders, who, financially independent and quite willing to exploit their professional brethren, have only personal ends to serve.

IT is the height of absurdity for anyone to try to make out that beer or alcoholic beverages of any kind are a necessity for medicinal purposes, and it goes without saying that the present propaganda in that direction comes from the breweries and not the medical profession. Even medical men who formerly used alcoholic beverages in moderation would not advocate it as a necessity in the practice of medicine. Of course we are compelled to admit that there are a few doctors who do not follow the straight and narrow path (even as there are preachers and priests who deviate from the narrow way)

and who may be willing to "sell their birth-right for a mess of pottage," but not all, and the medical profession as a whole has been injured in the eyes of the public because a few of its members have not the moral stamina to live up to the trust placed in them. Physicians, individually and collectively, should let it be known in no uncertain manner that this demand for the manufacture of beer and other malt liquors for medicinal purposes has not come from the medical profession, and that the medical profession as a whole is opposed to legalizing the manufacture of such in the name of medicinal therapeutics.

A NEW form of fraudulent advertising by so-called "spectacle houses" is appearing rather widely in publications which reach either the rural population who are remote from competent oculists or opticians, or the more ignorant and poorer classes who are easy to convince that they can save the expense of an oculist's examination and prescription by dealing with these advertisers. The advertiser offers to "fit glasses by mail", and following is a sample of the misleading advertisement:

NEW EYES FOR OLD

"NEW VISION" is the name of these glasses and New Vision is what they give you. They will enable you to do things you had long given up hope of ever doing, such as reading the smallest print, thread a needle, work, read or sew by daylight or lamplight, and see clearly at a distance or close-up. (With them even the fine print in the Bible can easily be read.)

Words alone can hardly express what these glasses will do for you, therefore, I want you to prove, yourself, by actually wearing and testing them in every way possible, that they are just the glasses you need.

Then follows an offer to send glasses on free trial with the privilege of wearing for twelve days before paying the sum asked for them. Lastly follows a coupon which the reader is asked to fill out and send in as an order. This coupon is supposed to convey the information on which the optician of the "Spectacle House" acts in prescribing the proper lens. On this coupon the only information requested is the *age* of the person, and how long he has used glasses, if ever.

The Associated Advertising Clubs of the World has sent out a circular warning people against such advertising, and mentions the names of three such firms whose advertising has been brought to their attention: The Chicago Spectacle House, 1462-1466 West Madison Street, Chicago; The New Vision Spectacle Shop, 1201-1209 West Van Buren Street, Chicago; and The St. Louis Spectacle Shop, St. Louis, Missouri. Physicians are advised to offer a word of warning against the patronage of such firms.

THE Missouri Legislature in annual session passed a bill which struck out of the medical practice act the word "reputable" as related to medical colleges, and substituted therefor the words "legally chartered". In spite of vigorous protests, the governor signed the measure. The words "legally chartered" are entirely without meaning since the worst diploma mills that ever existed have been chartered. In the majority of States it is easy for any group of individuals, no matter how irresponsible they may be, to secure a "legal charter" and to open a "school", "college", or "university", with full power to grant any or every degree in the category, no questions being asked as to whether they have the essential teachers, buildings or equipment, or the funds necessary to furnish the education usually required for such degrees. The word "reputable" on the other hand gave the State Board authority to enforce reasonably high standards of preliminary and professional education and to refuse recognition to any institution which on due inspection was found to be deficient in these respects. Missouri for the last few years has stood among the States in which practice acts have been fairly well enforced, and in which the public has been well protected against incompetent physicians. The present amendment to the practice act places the State in a position as bad as, if not worse, than that which existed twenty or more years ago. In this day of greater educational enlightenment the passage of legislation of this character by any State in the Union is surprising, to say the least. As the *Journal of the A. M. A.* (April 30) suggests, in spite of this handicap the Board, by holding a fairly rigid examination can still do much to weed out the incompetents if the governor will appoint competent examiners on the Board and support them in their work. We rather doubt any such action on the part of the governor, however, in view of the precedence established in originally signing an amendment with a standard so lowering.

THE report of the Committee on Public Policy and Legislation of the Iowa State Medical Society contains a commentary on the cheapness with which life and health in Iowa is held in the following:

"The advocates of better health laws have considered that human life is of more importance than the lives of farm animals, and asked the legislature for pure milk for the children, and the request was turned down, but, when it was demonstrated that tuberculosis in the herds was killing off the pigs which drank the same class of milk furnished the children, then the legislature had no hesitancy in making an appropriation of $250,000 to clean up the tuberculosis from the farm, in order to save the life of the pigs; and the U. S. Government provided another $250,000, making $500,000 for the two year period. A few days later the same legislature hesitated to appropriate an increase of $5,000 to the

board of control, making a total of $10,000, for an educational campaign against the ravages of tuberculosis in the human family."

In the days of slavery in the South the colored people were counted as chattels and worth real money. If slavery existed today, and it could be pointed out that the slaves were in danger of being wiped out, or their health and working ability impaired by disease, it is a safe bet that legislators would appropriate enough money to protect the slaves to the fullest possible extent. It seems too bad that the average legislator cannot be made to understand that health in human beings is a monetary asset, not only to the individual himself but the community at large. Therefore, money spent to stamp out diseases in the human being is well spent, and in fact public health and sanitation is an economic problem and should be divorced from all ideas of sentiment. The average legislator trembles with fear when he thinks of the criticism that will be heaped upon his luckless head if he fails to promote legislation that will save 500 hogs from death from hog cholera, but he never bats an eye when he is told that some disease threatens to wipe out of existence 5,000 human beings, and that a little work on his part may help to avert the disaster. Hogs represent real tangible dollars, but to the average legislator human beings have no monetary value. We are under the impression that most of the work done with our legislators concerning health laws is free from the economic argument. The thing to do is to put the matter on the basis of dollars and cents, for that is the only thing that appeals to the average legislator.

FOR a number of years the Council on Pharmacy and Chemistry of the A. M. A. has been urging physicians to avoid using proprietary trade marked names when prescribing drugs or chemicals obtainable under non-proprietary names. Two chemicals have been especially referred to in this connection: Hexamethylenamin and Acetylsalicylic acid. Hexamethylenamin, known to be an effective therapeutic agent especially as a urinary antiseptic, was commercialized by a firm of manufacturing chemists under the name "Urotropin" and widely advertised. As a result "Urotropin" has become so impressed on the minds of physicians that many have been unable to eradicate the term from their minds and still use it in prescribing this drug. Acetylsalicylic acid also was patented and the trade name "Aspirin" coined for it by the predecessor of the Bayer Company. The seventeen years of exclusive monopoly and privileged advertising made an impression on the minds of physicians, and also on those of laymen who had become used to seeing the word "Aspirin" in physicians' prescriptions. As a result when the patent expired, although numerous preparations of this drug were made available under the true and descriptive name. Acetylsalicylic acid, physicians continued to prescribe the drug under its coined name. The Bayer Company, who eventually acquired the rights in this product, has conducted a strong advertising campaign in the newspapers that leaves the impression on the lay mind that there is no satisfactory aspirin except aspirin (Bayer). Among the manufacturers who came into the market with this drug on the expiration of the Bayer patent was the United Drug Company. The owners of the Bayer product brought suit against the United Drug Company to prohibit the selling of the latter's product under the name "Aspirin". The United States District Court of Southern New York recently rendered a decision in this matter which is of importance to physicians. The ruling of the Court notes that acetylsalicylic acid is known as such to manufacturing chemists, pharmaceutical houses, pharmacists and physicians, so that to them the word "Aspirin" signifies only the product of Bayer origin, whereas the term "Acetylsalicylic acid" is unknown to the average lay mind, though the term "Aspirin" is used. The pharmacist, therefore, according to the Court's ruling is justified in supplying a layman who asks for aspirin with acetylsalicylic acid tablets of any reputable maker. But the Court rules—and physicians are urged to make note of this point—that *when a physician writes aspirin in a prescription, only the Bayer product can be supplied.* Unless a physician wishes to cater to the concern owning the Bayer rights and to aid in perpetuating what was a monopoly for seventeen years, he should be careful to prescribe the drug under the term "acetylsalicylic acid". The Court now places the responsibility directly on the medical profession, and accordingly, physicians are urged to avoid "aspirin" and to write "acetylsalicylic acid".

THE Public Health Committee of the New York Academy of Medicine in its fight against a chiropractic bill in the New York legislature issued the following statement of facts concerning chiropractic. This article contains so much of real fact that we take the liberty of publishing it in full:

A STATEMENT ON CHIROPRACTIC
BY THE PUBLIC HEALTH COMMITTEE OF THE NEW YORK ACADEMY OF MEDICINE

The interest of the medical profession in its opposition to the licensure of Chiropractors by the State of New York does not represent dissatisfaction with a school of the healing art conducted by competent educated persons skilled in the recognition and treatment of disease. It is not a subterfuge request to the State to guard the welfare of the recognized profession. It is a "safety first" warning by men qualified to judge the health interests of the State. The safety of the Commonwealth demands careful attention to at least one fundamental factor, namely: Are the exponents

of Chiropractic properly qualified to maintain the chief established principle of public health—*the prompt recognition and isolation of communicable disease?* An unbiased study of the requirements for graduation and practice of Chiropractic indicates that the Chiropractor is not by education or undergraduate experience in the least qualified to distinguish between communicable and non-communicable disease. Thus, license of the Chiropractor will immediately negate the elaborate, costly efficient efforts of the public health officials of the State in the prevention of epidemics by prompt report and segregation. This opinion is based on a large amount of collected evidence from which a few facts only are mentioned here to confirm thte stated conclusion. In the Announcement of the Palmer School of Chiropractic, the foremost teaching institution of its kind, the following is said of contagious disease: "Medical pathology assumes that contagious disease always existed, or, at least they seem to suppose that each one caught it from someone else and if they could cure each person having such a disease, there would be none to catch. Chiropractic pathology finds that the same cause that produced the so-called contagious disease in the first person that ever had it, produces the same in the second. To correct the cause of the contagious or other forms of disease in one, means to be able to do so in others. Disease conditions are similar, differing only in degree and Chiropractors find the causes in the body and not externally." In other words, the Chiropractor treats contagious diseases in the same manner as he treats all other conditions.

Study of the following text-books of Chiropractic demonstrates an absolutely inefficient description of communicable diseases and the safeguarding of the public health:

Harry E. Vedder: A Text Book on Chiropractic Physiology, Davenport, Iowa, 1916.

Willard Carver: Psycho-bio-physiology—consisting of applied psychology, biology as the cause of histology and anatomy, and a description of the conduct of anatomic parts which is physiology. Oklahoma City and New York, 1920.

Harry E. Vedder: A Text Book on Chiropractic. Gynecology, Davenport, Iowa, 1919.

S. Burich: A Text Book on Chiropractic Chemistry, Davenport, Iowa, 1919.

Examination of the Announcement of the Palmer School of Chiropractic, Davenport, Iowa, demonstrates that no opportunity is given to the students for the recognition of communicable disease and no training in the safeguards to prevent the spread of such diseases.

While the evidence at hand is amply sufficient to prove the absolute inability of the Chiropractor to recognize communicable disease from the knowledge and experience he gains at his institution of learning, conservatism and stern justice demand a complete, searching investigation of chiropractic claims in the treatment of non-communicable disease before definite conclusions are justified. Such investigation is now being undertaken by one of the Foundations interested in professional education and the outcome is awaited with interest. On command of the Lieutenant-Governor of Ontario, Canada, the Honorable Mr. Justice Hodgins of the Supreme Court was given a commission to investigate medical education in Ontario, and his report in 1917 fills a book of 117 pages. Relative to Chiropractic he considered all phases of the problem, its origin, progress and practice. While careful study of the entire report is fully justified, the following brief abstracts are sufficient to indicate his conclusions:

"The repudiation by the Chiropractor of all modern scientific knowledge and methods is such that it would be impossible to recommend any way in which they could be allowed to practice by which the public could be safeguarded. Their case was well presented, but was definitely Ishmaelitish. Those who appeared before me saw no necessity for preparatory qualifications, ridiculed and repudiated diagnosis, bacteriology and chemistry; admitted that a chiropractor acts in all cases on his cardinal principle, without examination.

"Dr. B. J. Palmer, the head of the most important chiropractic college in the United States, in giving the evidence in the case of the State vs. Janesheski, in December, 1910, when asked whether, when a patient came to a chiropractor, he was asked the history of the case, answered: 'No, because it be of no value'; and in answer to why that was so, said: 'A person comes to us without telling us what the trouble is; it makes no difference whether a physician has already diagnosed it as insanity, appendicitis, indigestion, or anything they call it. The chiropractor needs to know nothing about that case from a physician's standpoint; it is immaterial, yet he can take that case, put it down on his benches and analyze that spine just as accurately without knowing those things; in fact, sometimes I think better. . . . It is not essential the chiropractor should know what that patient said he had, but you can adjust the current for it running into the organ, and the patient is well. That is where chiropractics becomes purely a mechanical proposition, a mechanical and electrical-making circuit proposition in a man.'

"I cannot bring myself to the point of accepting, as part of our legalized medical provisions for the sick, a system which denies the need of a diagnosis, refers 95 per cent of diseases to one and the same cause, and turns its back resolutely on all modern scientific methods as being founded on nothing and unworthy even to be discussed."

The Public Health Committee of the New York Academy of Medicine desires to emphasize the fact that the principles of Chiropractic and the understanding on the part of Chiropractitioners of the cause of communicable disease are so completely at variance with the principles of medical science as to constitute a menace to the public health. By legal recognition of the Chiropractors, the public might be led to believe that the practitioners are capable of offering competent treatment.

DEATHS

WILLIAM H. ROBERTS, M.D., Terre Haute, died May 8, aged 81 years.

SARAH BORAN, wife of Dr. E. V. Boran, of Oakville, died April 30, aged 36 years.

MARY COLE, widow of the late Dr. W. C. Cole, of Attica, died May 9 at Kirkwood, Missouri.

ALBERT PARKER, M.D., died May 6 at his home at Ora. He graduated in medicine from the Curtiss Physio-Medical Institution, Marion, in 1895.

WALTER E. HARDMAN, M.D., of Anderson, died April 23 at Gary, aged 47 years. Dr. Hardman graduated from the Medical College of Indiana in 1896.

LUCIEN C. ELY, M.D., New Palestine, died May 5, aged 66 years. Death was due to paralysis. Dr. Ely graduated from the Indiana Medical College in 1878.

JOHN W. MCCAUSLAND, M.D., Fort Wayne, died May 31 at the St. Joseph Hospital, aged 65 years. Dr. McCausland graduated from Rush Medical College, Chicago, in 1879.

HARRISON PEACHEE, M.D., of Indianapolis, died May 11, aged 78 years. Dr. Peachee was a veteran of the Civil War and had practiced medicine in Indianapolis for many years.

WILLIAM J. HOADLEY, M.D., one of the oldest physicians in Hendricks county, died May 7 at his home in Danville, aged 90 years. Dr. Hoadley graduated in medicine from the Medical College of Ohio in 1866.

MOSES POLLOM, M.D., of Thorntown, died May 13, aged 42 years. Dr. Pollom graduated from the Medical College of Indiana in 1904. He was a member of the Indiana State Medical Association and the American Medical Association.

LEANDER DEWEES, M.D., of Hemlock, died May 14 of heart failure, aged 73 years. Dr. DeWees graduated in medicine from the Kentucky School of Medicine, Louisville, in 1894. He was a member of the Howard County Medical Society and the Indiana State Medical Association.

FRANK C. BOONE, M.D., Merom, died April 30, aged 61 years. Dr. Boone graduated in medicine from the Medical Department of the University of Louisville, Louisville, Kentucky, in 1893. He was a member of the Sullivan County Medical Society and the Indiana State Medical Association.

KENNETH M. FERGUSON, M.D., assistant physician at the Central Hospital for the Insane, died April 24. Dr. Ferguson had been a member of the staff of this hospital since June, 1920. He was born in 1863 and received his medical degree from the College of Physicians and Surgeons at Baltimore, Maryland, in 1882.

SAMUEL A. JOHNSTON, M.D., died May 20 from apoplexy at his home in Indianapolis, aged 45 years. Dr. Johnston was born in Indianapolis in 1876, studied medicine in Harvard University and graduated from the Indiana University Medical School. He was a member of the Indianapolis Medical Society, the Indiana State Medical Association and the American Medical Association.

LEANDER A. SPAULDING, M.D., of Bluffton, died May 12, aged 73 years. Dr. Spaulding was born in Blackford county in 1847. He began the study of medicine in 1873 and graduated from the Medical College of Ohio, Cincinnati, in 1877. He had practiced medicine at Bluffton for nearly 40 years. He was a member of the Wells County Medical Society and the Indiana State Medical Association.

WALTER D. HOSKINS, M.D., Indianapolis, died April 29 at the Methodist Hospital, Indianapolis, aged 50 years. Dr. Hoskins was born in West Newton in 1871 and was graduated from the Indiana Medical College in 1894. At the time of his death, he was a member of the faculty of the Indiana University School of Medicine, and an active member of the Indianapolis Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

TWENTY-FIVE nurses were graduated from the Indianapolis City Hospital Training School on June 8.

THE 63d annual meeting of the Indiana Dental Association was held the week of May 16 at Indianapolis.

DR. G. W. CAMPBELL, formerly of Winamac, has purchased the practice of Dr. W. P. Lane at Gary and has located in that city.

DR. R. E. DEWEES has been appointed City Health Officer for Hartford City to succeed Dr. Samuel Hardin, who resigned recently.

THE National Conference on Child Labor will be held in Milwaukee, Wisconsin, June 26-29, in connection with the conference on social work.

DR. A. C. CHENOWETH, who recently severed his connection with Dr. C. E. Caylor at Bluffton, has located at Wabash for the practice of medicine.

THE St. Joseph Hospital Training School for Nurses, Fort Wayne, held their graduating exercises on May 28, twelve nurses receiving their diplomas.

DR. CHARLES J. ROTHSCHILD, of Fort Wayne, anounces that on and after July 1st he will specialize in obstetrics and diseases and surgery of women.

DR. W. P. LANE has sold his practice at Gary and will locate in California. At present he is taking postgraduate work at the Mayo Clinic, Rochester, Minnesota.

THE initial meeting of the Italian Physicians' Association of America was held June 4 at New York City under the leadership of Dr. Michael Osnato, of New York.

DR. GEORGE H. MCCASKEY, Indianapolis, announces that he is limiting his practice to ophthalmology, with offices located in the American Central Life Building.

COL. HENRY PAGE of the United States Army has been elected Dean of the Medical College of the University of Cincinnati to succeed the late Dr. Christian R. Holmes.

DR. B. P. WEAVER, of Fort Wayne, was the guest of the Delaware-Blackford Medical Society at Muncie at their May meeting, presenting the leading paper of the evening.

THE annual meeting of the seventh Councilor District Medical Society will be held July 6, afternoon and evening, at Franklin. A program of unusual interest has been prepared.

MRS. BETTIE FLEISCHMAN HOLMES, widow of Dr. Christian R. Holmes, has donated to the University of Cincinnati the equipment of the medical college cafeteria valued at $5,000.

DR. SIMON FLEXNER, Director of the Rockefeller Institute for Medical Research, has been elected an honorary fellow of the Royal Society of Tropical Medicine and Hygiene of London.

DR. J. A. CRAIG, wife and daughter, of Greenwood, left June 1 for an automobile tour through the East. During his absence he attended the annual session of the American Medical Association at Boston.

PHYSICIANS of Anderson recently have organized the Anderson Academy of Medicine. Dr. M. A. Austin is president, Dr. H. E. Gante secretary, and Drs. A. M. Collins, Weir Miley and Thomas Jones directors.

DR. and MRS. CHARLES BEALL and DR. and MRS. MILES PORTER, JR., of Fort Wayne, left June 2 for a motor trip through the East. While absent they attended the annual session of the American Medical Association at Boston.

DR. JOHN D. MCKINNON has purchased the practice of Dr. Frank A. King at Garrett and located there for general medical and surgical work. He will have associated with him Dr. D. M. Reynolds, formerly a partner of Dr. King.

DRS. I. M. SANDERS, D. E. DOUGLASS and C. R. BIRD, of Greensburg, and DR. P. E. CLARK of Clarksburg left May 28 by auto for Boston and other eastern points where they expect to spend the next month or six weeks in postgraduate work.

THE Wells County Medical Society held a banquet at the Bliss Hotel on May 18. Speakers for the evening were Dr. Willis D. Gatch, of Indianapolis, who spoke on "Empyæma," and Dr. J. O. Ritchey, of Indianapolis, who spoke on "Nephritis".

DR. EUGENE LORING BULSON, who has been doing postgraduate work in New York City, will return to Fort Wayne about July 1 to be associated with his father, Dr. Albert E. Bulson, Jr., in the exclusive practice of ophthalmology and otolaryngology.

A FIFTH City Tuberculosis Clinic has been opened at 1933 Hillside Avenue, Indianapolis, under the supervision of the City Board of Health. Dr. C. J. McIntire is in charge and the clinic will care for patients mornings from 8 to 10 o'clock and Thursday afternoons from 3 to 5.

DR. ALBERT E. BULSON, JR., and daughter, Miss Geraldine, of Fort Wayne, attended the annual session of the American Medical Association at Boston. While in Boston, Dr. Bulson attended a meeting of the American Board for Ophthalmic Examinations, of which he is a member.

DR. FRANK A. KING, who has practiced medicine and surgery in Garrett for the past eighteen years, has disposed of his practice at that place and removed to Benton Harbor, Michigan, his former home. Before assuming practice at Benton Harbor he expects to spend six months in postgraduate work.

AT the annual meeting of the 9th Councilor District Medical Society, held at Lafayette, May 12, Dr. A. C. Arnett, of Lafayette, was elected president; Dr. G. D. Marshall, Kokomo, first

vice-president; Dr. Fred Tucker, Noblesville, second vice-president; and Dr. A. L. Loop, Crawfordsville, secretary-treasurer.

THE International Health Board of the Rockefeller Foundation has sent out a commission composed of Dr. William Walter Cort and E. L. Augustine, of Baltimore, and Dr. J. E. Acherst, of the Kansas State Agricultural School, to the Island of Trinidad to spend three months studying hook worm. They sailed on May 5.

DR. and MRS. BUDD VAN SWERINGEN, of Fort Wayne, with DR. and MRS. WILLIAM FULLER, of Chicago, left May 18 for a motor trip through the East. Dr. Van Sweringen will attend the Convention of Military Surgeons, the American Railway Surgeons' Convention and the annual session of the American Medical Association, while in the East.

THE Board of Directors of the Union Hospital, Terre Haute, has accepted the plans and specifications for a $300,000 addition. Plans for the construction are being pushed as rapidly as possible. The new addition calls for a six story building with the first four floors containing 20 private rooms and four baths to the floor and a sun room covering the entire roof.

THE Marion County Tuberculosis Association has organized a campaign to do away with promiscuous spitting in Indiana and particularly Marion County. Many civic groups are cooperating in this campaign and have adopted resolutions advocating the enforcement of present health regulations against the spitting menace and urging enactment of further regulating measures.

DR. A. M. MENDENHALL, of Indianapolis, was the guest of the Montgomery County Medical Society at Crawfordsville on May 9 presenting a paper on "Pituitrin in Obstetrics". He presented the same paper before the Fayette County Medical Society at Connersville on May 21, and on May 27 addressed the Muncie Academy of Medicine on the subject of "Obstetrics in General Practice".

HONORARY fellowships to the following American surgeons have been awarded by the Council of the Royal College of Surgeons of Ireland: Drs. William J. Mayo and Charles H. Mayo, Rochester, Minn.; George Emerson Brewer, New York; George W. Crile, Cleveland; Richard H. Harte and William W. Keen, Philadelphia, and Albert J. Ochsner, Chicago. The ceremony of conferring the honors will take place in the autumn.

LEGAL obligations of a county or township to indigent tuberculosis patients are set out in an opinion that U. S. Lesh, Attorney-general, has prepared for Dr. Amos Carter, Superintendent of the Indiana State Tuberculosis Sanitorium at Rockville, Indiana, and is as follows: "I do not think that a board of county commissioners can legally refuse to aid paupers who are afflicted with tuberculosis. If it prevents their being cared for at the Poor Asylum, it should arrange for their maintenance elsewhere."

THE House of Delegates of the Ohio State Medical Association in session at Columbus, May 2-5, approved, by a vote of 58 to 10, senate bill 184, which repeals the law permitting nurses to administer anesthetics. The committee on the president's address reported favorably to the House of Delegates on his recommendation that the medical profession put aside its conservative policy and utilize the press to the fullest possible extent in teaching the people the things they ought to know about their life and health.

THE Research Information Service of the National Research Council announces that it is prepared to assist investigators by locating scientific publications which are not generally or readily accessible. It will also, as is desired, have manuscripts, printed matter or illustrations copied by photostat or typewriter. The cost of copying varies from 10 cents to 25 cents per page. Requests for assistance should be addressed to the National Research Council Information Service, 1701 Massachusetts Avenue, Washington, D. C.

THE Northern Hospital for the Insane at Logansport under the superintendency of Samuel Dodds has announced that a regular program of music and games under a competent leader has been made a part of the routine of the Institution. The theory is that such programs and games will be beneficial in awakening the indifferent from their lethargy and getting them away from their illusions and hallucinations. Such treatment it is believed will help the curable cases to recover faster and aid the incurable cases to adjust themselves better. In the industrial department of the Institution, the patients make brooms, brushes, rugs, weave sheeting and shirting, knit socks and stockings, make awnings and mattresses, mend shoes, and make harness.

MORE than 100 doctors, hospital superintendents and nurses from various parts of the state met at Lafayette, April 27, and organized the Indiana State Hospital Association. Dr. George F. Keiper of Lafayette was elected president; Miss Clara V. Pound, of the Reid Memorial

Hospital, Richmond, first vice-president; Dr. W. O. Gross, Fort Wayne, second vice-president; Miss Anna Mendenort of the Home Hospital, Lafayette, secretary; and Mrs. Ethel P. Clarke, of the Robert W. Long Hospital, Indianapolis, treasurer. Directors are Dr. C. S. Woods, Indianapolis; Dr. A. M. Hayden, Evansville; Dr. T. B. Templin, Gary; Dr. H. A. Duemling, Fort Wayne, and Dr. Charles M. Combs, Terre Haute. The object of the Association is to promote cooperation of hospitals throughout the State for the common welfare.

SECRETARY MELLON of the Department of the Treasury has ordered the centralization of all work, officers and personnel of the United States Public Health Service connected with the medical treatment of disabled war veterans, with the exception of hospitals and dispensaries, under the Bureau of War Risk Insurance. The reorganization will be put in effect at once. The change means that all field offices of the public health service engaged in the work of examining and finding suitable hospital beds for service men will be taken over by the Bureau of War Risk Insurance. All the contracts with private institutions for the treatment of such men will be taken over by the bureau also. The bureau proposes to establish an adequate force of medical inspectors to insure proper and effective treatment of patients of the bureau in whatever institutions they may be placed.

DURING May the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

The Gilliland Laboratories:
ACNE MIXED VACCINE—GILLILAND.

Hoffman—LaRoche Chemical Works:
PITUGLANDOL.

Lederle Antitoxin Laboratories:
CHOLERA VACCINE (PROPHYLACTIC)—LEDERLE.
PLAGUE VACCINE (PROPHYLACTIC)—LEDERLE.

H. A. Metz Laboratories:
SILVER SALVARSAN
" " 0.05 Gm. Ampules.
" " 0.1 Gm. Ampules.
" " 0.15 Gm. Ampules.
" " 0.2 Gm. Ampules.
" " 0.25 Gm. Ampules.
" " 0.3 Gm. Ampules.

Seydel Manufacturing Co.:
GUAIACOL BENZOATE—SEYDEL.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	87
2.	Franklin	S. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	24
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	27
15.	Washington	Irvin Huckleberry	5	18
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19
18.	Allen	Miles F. Porter, Jr.	95	105

ELEVENTH DISTRICT

The twenty-fifth meeting and banquet of the Eleventh Indiana Councilor District Medical Association was held at Logansport, Thursday, May 19th, with seventy-six doctors from Grant, Huntington, Wabash, Miami, Cass and Carroll counties in attendance.

From ten o'clock until twelve Thursday morning clinics were held at the St. Joseph Hospital, under the direction of Dr. C. C. Hickman. Cases were presented by Drs. Rodney Troutman, C. H. McCully, J. H. Reed and James Gilbert.

In the afternoon the following scientific program was carried out: "New Ideas on the Treatment of Diphtheria," Dr. Lorin W. Smith, Wabash; "Cesarean Section Versus High Forceps Delivery," Dr. W. F. Smith, Huntington; "Epidemic Encephalitis," Dr. W. A. Fankboner, Marion; "Immunology," Dr. James L. Gilbert, Logansport.

The ladies were entertained with cards and games at the Trinity Parish House during the afternoon. At six o'clock a banquet was served at the Elks' Hall, followed by dancing and a musical entertainment.

Officers for the ensuing year were elected as follows: President, Dr. Ira E. Perry, North Manchester; and secretary-treasurer, Dr. J. H. Reed, of Logansport. Marion was selected as the next place of meeting to be held the third Thursday in October.

The meeting was the largest ever held in this District, and was most satisfactory from every point of view.

Dr. David N. Ross of Indianapolis was a guest of honor.

J. H. REED, Secretary-Treasurer.

TIPPECANOE COUNTY

After a six o'clock luncheon at the Hotel Lahr, April 15, 1921, an advanced regular monthly meeting was called to order by President McClelland. Minutes of previous regular meeting read and approved without change.

The regular order of business was waived and Dr. Reser introduced the speaker of the evening, Dr. Charles H. Viol, of the Standard Chemical Co., of Pittsburgh, Pa., who as a Lafayette boy, a graduate of Purdue University, has gone out into the world and made for himself a reputation which is not only national but international as a radium expert. Dr. Viol's subject was "RADIUM", which he handled from the standpoint of its discovery, its chemistry, the theory of its physical properties, the description of its production (which he illustrated by lantern slides) and some suggestions as to its therapeutic qualities.

Synopsis:—Shortly after the discovery of x-ray in 1895, Becquerell found two spots on a photographic plate that had been laid away in a dark drawer

along with some uranium. He immediately began searching for x-rays in this and similar minerals, and in this research work discovered that the salts of uranium had phosphorescent qualities and radiographic properties; and soon afterwards, in 1898, Madam Curie and her husband discovered radium.

Madam Curie, born of Polish descent, was a chemist who with her husband worked in a laboratory in Paris. The Curies, following the clew that Becquerell had tipped off and working with great originality and ingenuity through hundreds of processes of fractional crystallization, finally discovered the radioactive substance which Madam named radium. Later this woman through wonderful originality and inventive genius invented the electroscope which made it possible to measure the actual quantity of radium in a given sample. By means of this instrument the international radium standard was established in 1912 and today this standard is as immutable as the yard stick is for lineal measurements.

The atomic weight of radium is 225, this being exceeded by but two elements, thorium (231), and uranium (239).

All atoms are made up mainly of space in which are innumerable positive and negative electrons grouped around the element hydrogen (H).

The atom is compared to a planetary system with the central nucleus as the planetary body, and revolving around it in illimitable space are positive and negative electrons as satellites. Vibrations of these electrons in the case of the atom of radium, produce light—radium rays. In this atom the electrons are in an unbalanced state and in the rearrangement of electrons small charged particles are thrown off, traveling with great velocity—radio-active particles. Radio-activity is spontaneous emission of particles at high velocity. Thirty-four billion of these particles are transmitted every second and still it would take 1700 years for it to lose one-half its value, and another 1700 years to lose one-half its remaining value and in like proportion extending on into infinity. During this process there is formed radium emanations, which is probably a gas, called by some helium, which loses *half its value* in less than *four days* (3.85 days), and which is inert in one month. It is much more active than radium itself.

Radium rays are of three groups, *alpha, beta* and *gamma,* and their penetrations are, respectively, as 1, 100 and 10,000.

Alpha rays are positive, travel 12,000 miles per second, have slight power of penetration, are very caustic, are soon absorbed or easily screened as by a few layers of paper or by the glass of the containing tube; they have no therapeutic value as such but produce emanation.

Beta rays are negative, 100 times as penetrating as *alpha,* velocity about the same as light, 192,000 miles per second, composed of soft and hard rays, the latter penetrating deeply, and somewhat caustic, can be screened by a few mm. of heavy metal, as platinum.

Gamma rays are impulses made up of short waves of great velocity; composed of both soft and hard rays. The shorter the wave length the harder the ray and the more penetrating. Gamma rays are the most penetrating (10,000 times more than *alpha*), and the least caustic. Gamma rays are one-half absorbed in passing through one-half inch of lead and one-half of the remainder in passing through another half inch of lead and in like proportion *ad finitum;* while x-rays would be all absorbed by one-tenth inch of lead. It would take an x-ray spark gap of 8 to 16 feet to equal the hardest *gamma* ray.

Production:—Produced at the beginning mostly from pitchblend obtained in Bohemia, but this ore is not very productive. Uranium ores are the most productive. Those of southwestern Colorado, called carnotite, are of high grade. A lower grade which is of a sandstone type is more easily worked. It takes 500 tons of this sandstone ore to produce one gram of radium. This 500 tons is reduced at the mines by grinding and washing to 125 tons, which is then sacked and transported by burros and trucks 65 miles to station, from where it is shipped by rail to Pittsburgh. The cost of rail transportation is less than from from mine to station.

To work up this 125 tons of concentrate (originally 500 tons of stone) requires over 500 tons of chemicals, 800 to 1000 tons of coal and over 500 processes of fractional crystallization, consuming months of time, the final product being one gram of radium whose market value today is $120,000.

The Colorado carnotite is the highest grade radium ore in the world but was never worked up in this country until 1913.

The total amount produced in the entire world since its (radium) discovery is 120 grams, about one-third of a pound.

There are about 50 grams in the United States, being more than one-third of all the radium in the world today. The Pittsburgh plant produced .18 grams last year, practically one-third as much as is in the United States today. France has one gram; Germany less than one gram; England two grams.

Therapy:—Radium can be used in most all forms of dermatological lesions, as eczema, nevi, port wine stains, pruritis, new growths both benign and malignant. It is used in treating malignancy in all forms and in all regions. It has an advantage over x-rays in that it can be applied in body cavities directly against or in growths without having to penetrate normal tissue. One of its greatest fields for successful results is uterine hemorrhage.

For therapeutic application it is provided in three forms: tubes, needles and placques,—tubes for introducing in body cavities, hollow needles for introducing directly into tumors, and placques when you wish to apply it over external areas as in cases of nevi, port wine stains, and other disfiguring lesions. The cosmetic results in these lesions are almost magical, but it requires the most expert knowledge and skill in order not to produce more damage by scarring than was present originally. Radium and x-ray treatments combined may be practiced in the future.

Radium bromide is a water soluble salt, therefore it is transformed into radium sulphate, which is insoluble and therefore not liable to be lost by leakage when placed in moist tissues. Radium sulphate is a white powder that turns brownish with age but assumes its white color again on heating.

Discussion:—Dr. Wetherill asked: (1) Are the radium undulations actual? (2) Are the cancer cells destroyed or are they left in simply a resting stage? (3) Is radium a metal? Ans. 1st: Undulations are same as light waves through ether but of higher frequency and greater velocity. 2nd: The cancer cell nuclei which are in the field are destroyed, but probably some cells in the outlying parts are not touched. 3rd: Radium is a metal but it is used only in the form of a salt.

DR. BAYLE: What is emanation? Ans.: It is really a gas.

DR. WETHERILL: What is the smallest therapeutic dose? Ans.: 10 mg. used for cosmetic purposes.

Dr. Hunter announced that at the laboratory he had a sarcoma section from tissue treated with radium which showed beautifully the destruction of the nuclei.

A rising vote of thanks was given Dr. Viol for the evening's entertainment.

Dr. Keiper announced that the local committees for the promulgation of a State Hospital Association had perfected their arrangements, and the meeting would be held in Lafayette, Apr'l 27 and 28. It was moved, seconded and carried that this society entertain the visiting delegates and the local doctors and their wives at a 6 o'clock dinner at the Hotel Fowler. The chair appointed as a banquet committee for the occasion Drs. Pyke, Davisson and Van Reed; and as an automobile committee, Dr. Shafer. It was also moved, seconded and carried that the banquet be informal. Adjourned.

Members present, 38. Visitors present, 4.

W. M. RESER, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

SILVER ARSPHENAMINE.—SODIUM SILVER ARSPHENAMINE.—The sodium salt of silver-diamino-dihydroxy-arseno-benzene, containing approximately 20 percent of arsenic and approximately 15 percent of silver. The action and uses of silver arsphenamine are essentially those of arsphenamine (see New and Nonofficial Remedies, 1921, p. 41). Its claimed advantage over other arsphenamine preparations is said to be due to the silver which improves the chemo-therapeutic index. In the presence of organic diseases of the heart, aneurysm, aortitis as well as other parenchymatous diseased conditions of the glandular structures, silver arsphenamine should be used with great caution and in small doses. The dose of silver arsphenamine is from 0.1 to 0.3 gm. for adults. To administer silver arsphenamine the product is dissolved in sterile distilled water without application of heat and without shaking and then diluted with 0.4 percent sodium chlorid solution to make 20 Cc. per 0.1 gm. of silver arsphenamine.—(*Jour. A. M. A.*, May 7, 1921, p. 1312).

SUPRARENALIN.—A brand of epinephrine, N. N. R. (see New and Nonofficial Remedies, 1921, p. 107). Marketed only in the form of Suprarenalin Solution.

SUPRARENALIN SOLUTION.—One thousand parts contain suprarenalin sulphite equivalent to one part of suprarenalin in physiological solution of sodium chlorid without addition of other preservatives. Armour & Co., Chicago.

STERILE AMPULES OF BENZYL BENZOATE-H. W. & D. 0.5 Cc.—One Cc. contains 0.5 Cc. benzyl benzoate-H. W. & D. (see New and Nonofficial Remedies, 1921, p. 61) diluted with olive oil. Each ampule contains more than 1 Cc. Hynson, Westcott & Dunning, Baltimore, Maryland.

SILVER DIARSENOL.—A brand of silver arsphenamine, N. N. R. (see *Jour. A. M. A.*, May 7, 1921, p. 1312). Silver Diarsenol is marketed in ampules containing, respectively, 0.05 Gm., 0.1 Gm., 0.15 Gm., 0.2 Gm., 0.25 Gm. of silver diarsenol. Diarsenol Co., Inc., Buffalo, N. Y. (*Jour. A. M. A.*, May 14, 1921, p. 1353).

MERCUROCHROME-220-SOLUBLE.—The disodium salt of dibromo oxymercury fluorescein, containing 23 to 24 percent of mercury. Mercurochrome-220-Soluble is a strong and rapidly acting germicide. It is active in urine 1 : 1,000 solution, killing Bacillus Coli and Staphylococcus aureus in this medium in one minute. It penetrates the tissues readily. The drug is tolerated in a strength of 1 percent by the bladder, renal pelvis and urethra. A 2.5 percent solution applied to the anterior urethra causes only temporary discomfort. The toxicity, when tested by intravenous injection into rabbits, is rather high. Mercurochrome-220-Soluble has been used in cystitis, urethritis and in chancroidal ulcerations: also in affections of the eye and ear. Hynson, Westcott & Dunning, Baltimore, Maryland.—(*Jour. A. M. A.*, May 21, 1921, p. 1403).

PROPAGANDA FOR REFORM

ASPIRIN OR ACETYLSALICYLIC ACID.—For many years the Council on Pharmacy and Chemistry, and the *Journal of the American Medical Association* have been urging physicians to avoid using proprietary names in prescribing drugs obtainable under a non-proprietary name. Two substances have been especially referred to in this connection, hexamethylenamine and acetylsalicylic acid. Many years ago, hexamethlenamine was found to be an effective therapeutic agent, especially as a urinary antiseptic. Since it was a well known chemical it could not be patented. A commercial firm, however, seized the opportunity and coined the name "urotropin" and advertised it. As a result the proprietary name became so fixed in the minds of physicians that some still use it in their prescriptions instead of hexamethylenamine. Acetylsalicylic acid was patented and the trade name "Aspirin" coined for it by the predecessors of the Bayer Company. During the patent monopoly both physicians and the public became familiar with the term Aspirin. When the patent expired, physicians continued to prescribe Aspirin, even though the drug was available under its proper name, acetylsalicylic acid. Having acquired the rights to Aspirin, the Sterling Products Company, under the name of "The Bayer Co.", has during recent years attempted to impress on the lay mind that there is no satisfactory Aspirin except Aspirin-Bayer. Recently a suit has been decided in which the Bayer Company sought to restrain the United Drug Company from selling acetylsalicylic acid under the name aspirin. The court holds that, since the public knows the drug as Aspirin only, the pharmacist may sell any brand of acetylsalicylic acid to the public when Aspirin is called for. On the other hand, manufacturers, pharmacists and physicians know the term acetylsalicylic acid and know that the term Aspirin was coined by the Bayer concern and hence, when a physician writes for Aspirin in his prescription only the Bayer product may be supplied. Physicians should avoid the term "Aspirin" and instead prescribe "acetylsalicylic acid". —(*Jour. A. M. A.*, May 14, 1921, p. 1356).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the claims advanced for them were held to be false: Murphey's Second Summer Remedy (Murphey Medicine Co., Inc.), an emulsion containing alcohol, sugar, castor oil, plant material and traces of peppermint oil and morphin.—(*Jour. A. M. A.*, May 21, 1921, p. 1417).

LUDLUM'S PASTE (Williams Manufacturing Company), consisting of copaiba, cubebs, and oil of sassafras in a fatty base. Prickly Ash, Poke Root and Stillingia Compound with Iodids (Allan-Pfeiffer Chemical Company), consisting of plant extractives, including a laxative drug, potassium iodid, alcohol, sugar and water. Gauvin's Cough Syrup (J. A. E. Gauvin), consisting essentially of extractives of wild cherry bark, spruce gum, sugar, alcohol and water. Meyer's Red Diamond Kidney Tablets and Compound Extract of Sarsaparilla with Iodid of Potassium (Meyer Drug Company), the first containing salts of benzoic and boric acids, atropin and vegetable extractives, the second consisting essentially of a syrup containing caramel, vegetable extractives, with small

amounts of potassium iodid, ferric chlorid and alcohol. Leonard Ear Oil (A. O. Leonard), consisting essentially of camphor, oil of eucalyptus, and traces of alkaloids in a base of liquid petrolatum.—(*Jour. A. M. A.*, May 21, 1921, p. 1417).

ERUPTION AFTER LUMINAL.—Luminal has been reported by two authors as producing an exanthem simulating urticaria: by two others an eruption simulating measles: by three, as simulating scarlet fever: and by two, as an unclassified drug eruption.—(*Jour. A. M. A.*, May 28, 1921, p. 1517).

TEKARKIN.—Many physicians have received a sixteen page pamphlet, "Therapeutic Leaves". "Therapeutic Leaves" purports to be a periodical, published as "a medium for the dissemination of knowledge pertaining to therapeusis". Actually it is an advertising medium dealing with the products of the National Bio-Chemical Laboratory—"Osmo-Calcic Solution", "Tekarkin" and "Osmotic Mangano-Potassic solution". These three preparations are said to be the formulas of Edward Percy Robinson, who lives in Mount Vernon, N. Y., and has an office in New York City. They are used by Dr. Robinson in the treatment of cancer. A package containing about 65 minims of Tekarkin and one ounce each of the other preparations sells for ten dollars. Most of the material in "Therapeutic Leaves" is a rehash of four papers published by Edward Percy Robinson in the *New York Medical Record*. In these Robinson advanced the theory that cancer is caused by an excess of sodium chlorid in the blood and tissues, and that it can be cured by administering a solution of potassium nitrate. However, "Homemade solutions," says Dr. Robinson, "are apt to be disappointing", and hence a solution of this chemical is sold as Tekarkin. This dilute potassium nitrate solution sells at the rate of sixty-seven dollars an ounce. At one time Dr. Robinson specialized in "facial contouring". Except for the articles that have been published in the *Medical Record*, literature does not indicate that Edward Percy Robinson can lay claim to special knowledge of or skill in the treatment of cancer.—(*Jour. A. M. A.*, May 28, 1921, p. 1514).

VACCINATION AGAINST INFLUENZA.—Prophylactic vaccination against influenza was practiced extensively during, but mostly following, the recent epidemic of the disease. In some districts stock cultures were employed; in others a culture of the strain or strains isolated during the epidemic, and in still others a mixed vaccine. McCoy presented his impression, as gained from the uncontrolled use of these vaccines, that while therapeutically they might be of value in the prevention of influenza, yet in every case in which they were tried under perfectly controlled conditions, they failed to influence either morbidity or mortality. In an elaborate study, Jordan and Sharp conducted observations on approximately six thousand persons. About one-half of these were vaccinated with a saline suspension of a standardized mixed vaccine; the remaining half were not vaccinated. The influenza attacks among the vaccinated numbered 4.1 percent; among the unvaccinated the morbidity from this disease was 4.8 percent.—(*Jour. A. M. A.*, May 28, 1921, p. 1503).

AQUAZONE (OXYGEN WATER) NOT ADMITTED TO NEW AND NONOFFICIAL REMEDIES.—Aquazone is stated by the Aquazone Laboratories, Inc., Los Angeles, California, to be a supersaturated solution of oxygen in water, carrying approximately five and one-half times as much dissolved oxygen as ordinary water. In an advertising booklet, it is suggested that Aquazone is of value in the treatment of influenza, pneumonia, typhoid, Bright's disease and kindred disorders. It was also stated therein that in the treatment of fevers it lowers the temperature, and that the administration of three bottles of Aquazone (representing 0.033 gm.—1½ grains—of oxygen) is of value for "preventive and tonic purposes".

The evidence which the Aquazone Laboratories submitted did not show that the effects were other than those which might be obtained from the administration of ordinary potable water. The Council declared Aquazone inadmissible to New and Nonofficial Remedies, because the therapeutic claims made for it were unwarranted, and because its use is irrational for the reason that oxygen given by stomach in this way is of little or no value.—(Abstracted from Reports Council on Pharmacy and Chemistry, 1920, p. 50).

COAGULIN-CIBA OMITTED FROM NEW AND NONOFFICIAL REMEDIES.—Coagulin-Ciba was admitted to New and Nonofficial Remedies in 1915. It is stated to be an extract prepared from blood platelets and to contain thromboplastic substances mixed with lactose. Extensive clinical reports appeared to justify its acceptance for New and Nonofficial Remedies. However, in 1918, Dr. Arthur D. Hirschfelder reported to the Council that a number of specimens of Coagulin-Ciba failed to accelerate the coagulation time of blood. The results of Dr. Hirschfelder were subsequently confirmed by Dr. P. J. Hanzlik, who made an extensive investigation of the effects of Coagulin-Ciba at the invitation of the Council's Therapeutic Research Committee. Since the evidence indicates that Coagulin-Ciba has little efficacy, if any, as a hemostatic, the Council directed its omission from New and Nonofficial Remedies.—(Abstracted from Reports Council on Pharmacy and Chemistry, 1920, p. 53).

ELECTRARGOL OMITTED FROM NEW AND NONOFFICIAL REMEDIES.—Electrargol—a preparation of colloidal silver—was admitted to New and Nonofficial Remedies in 1914. In 1918, Fougera & Co. was advised of unwarranted claims which were being made for Electrargol and notified that the product would be omitted from New and Nonofficial Remedies unless a thorough revision of the claims was made in a reasonable time. As the reply of Fougera & Co. indicated that a genuine effort was being made to comply with the request of the Council, Electrargol was retained for the 1919 edition of the book. A reply was received from Comar & Co., in 1919. This reply was a refusal, with one exception, to modify the claims objected to. In view of this refusal to modify the claims, with one exception, the Council directed the omission of Electrargol from New and Nonofficial Remedies.—(Abstracted from Reports Council on Pharmacy and Chemistry, 1920, p. 58).

BOOK REVIEWS

NURSING IN EYE, EAR, NOSE AND THROAT DISEASES—By A. Edward Davis, A.M., M.D., Professor of Diseases of the Eye in the New York Postgraduate Medical School and Hospital, and Beaman Douglass, M.D., Professor of Diseases of the Nose and Throat in the New York Postgraduate Medical School and Hospital. Second Revised Edition. 346 pages; with 32 illustrations. Price, Cloth, $2.50. F. A. Davis Company, Philadelphia, 1920.

Every surgeon has his pet ideas concerning the manner in which his cases shall be attended and he generally insists upon assistants and nurses following his technic in the care of all of his patients. There are, however, certain well-defined principles which always should be the guide for students and nurses in the care of various diseases, and the duties during

and following operations. This volume on Eye, Ear, Nose and Throat Nursing, by two well known New York clinicians, is a safe guide for nurse, student or general practitioner, and offers practically all that should be known pertaining to the subject. While some of us may in a few instances follow a different technic than that advocated, yet no one is justified in criticising anything that is offered, and we therefore unhesitatingly recommend the book for the purposes for which it was written.

THE AMERICAN YEARBOOK OF ANESTHESIA AND ANALGESIA—1917 and 1918. By F. H. McMechan. A.M., M.D. 500 pages. Cloth, $10. Surgery Publishing Company, New York City.

In reality this book is a collection of original contributions to medical journals by prominent men, covering the advances in anesthesia during 1917 and 1918. Fortunately the book contains practically all the worth while advances of anesthesia and analgesia in the surgery of war. In this connection it may be mentioned that during the war advantage was not taken of all of the best and most approved knowledge concerning anesthesia and analgesia, due perhaps to the short-sighted policy in not recognizing the fact that this branch of medical and surgical work is highly specialized and is deserving of being so recognized. Those experts in this special field whose talents were employed to the best advantage during the war were able, through the varied experience that the war afforded, to make still further advances, all of which are finding a place to-day in our civilian practice.

In the present yearbook an attempt has been made to collate papers dealing with the same subject or its pertinent phases. In so doing some duplication has occurred, but differences in technic and research have not been eliminated. The various chapters are as follows: Complicating Factors of Anesthesia; Safety Factors in Anesthesia; Anesthesia and Acidosis; Blood Changes Under Anesthesia; Circulatory Disturbances Under Anesthesia; Temperature and Anesthesia; Pharmaco-Physio-Pathology of General Anesthetics; Special Methods of Anesthesia; Anesthesia at the Front; Anesthesia in War Surgery; Intratracheal Anesthesia; Pharmaco-Physio-Pathology of Local Anesthetics; Local Anesthesia in General Surgery; Local Anesthesia in the Specialties; Local Anesthesia in Dentistry and Oral Surgery; Anesthesia in Obstetrics; Sacral Anesthesia; Spinal Anesthesia; Postoperative Care.

PRINCIPLES OF HYGIENE: A Practical Manual for Students, Physicians, and Health-Officers. By D. H. Bergey, M.D., Dr.P.H., Assistant Professor of Hygiene and Bacteriology, University of Pennsylvania. Seventh Edition, thoroughly revised. 556 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $5.50 net.

Several editions of this work are proof of its popularity. This last edition represents a rather thorough revision, largely required as a result of developments brought about by the great world war and the necessity for application of preventive measures on an extensive scale. The book has been prepared to meet the needs of students of medicine in the acquirement of a knowledge of those principles on which modern hygiene practices are based; to aid the students in architecture in comprehending the sanitary requirements in ventilation, heating, water supply and sewage disposal, and to aid physicians and health officers in familiarizing themselves with the advances made in hygienic practices in recent years. The author again calls attention to the lack of definite prophylactic agents for such diseases as scarlet fever, measles, mumps and pneumonia, and especially for influenza and poliomyelitis, and he hopes that in the near future prophylactic agents that will bring these epidemic diseases under control may be discovered. The book contains chapters on Air, Ventilation, Heating, Water and Water Supply, the Removal and Disposal of Sewage, Garbage Disposal, Food and Dieting, Exercise, Clothing, Personal Hygiene, Industrial Hygiene, School Hygiene, Military Hygiene, Naval Hygiene, Soil, Habitations, Vital Causes of Diseases, Disinfection, Quarantine and Vital Statistics. The chapters on Military and Naval Hygiene have been entirely rewritten and contain more new information based upon experiences during our late war. Several other chapters, and especially the one on Industrial Hygiene, also have been amplified.

BACTERIOLOGY FOR NURSES: By Harry W. Carey, A.B., M.D. Assistant Bacteriologist, Bender Hygienic Laboratory, Albany, New York (1901-3). Pathologist to the Samaritan, Troy, and Cohoes Hospitals, and City Bacteriologist, Troy, New York. Second Revised Edition. 150 pages. Cloth, $1.25 net. F. A. Davis Company, Philadelphia. English Depot, Stanley Phillips, London. 1920.

The author starts by saying that his book is an introduction to Bacteriology for Nurses. If this is an introduction, we are under the impression that the author thinks that the nurses ought to have a still more thorough knowledge of bacteriology than is contained in this excellent little work of his which gives more bacteriology than a good trained nurse need possess. We do not agree with him that many of the duties of the nurse require such an extended knowledge of bacteriology as is encompassed in the volume which he has prepared for the use of nurses. Undoubtedly the acquisition of much information of a technical character pertaining to the science and practice of medicine would prove valuable to a nurse, but already we have gone too far in ultra scientific training of nurses, and the crying need of the hour is, not so many over-trained nurses and nurses so thoroughly trained in technical knowledge as for many nurses with a good practical knowledge of the fundamental principles upon which nursing is founded. In other words, what we need is more nurses who can really care for the sick in a helpful manner rather than so many nurses, such as we too often see to-day, who are so highly trained that they feel that they can almost act in the capacity of the doctor, and are really of little service to the patient in caring for him in a sympathetic way and making him comfortable according to the most approved rules of nursing. However, aside from the condemnation of the object of the book, we have no criticism to offer, as the text does cover in a very satisfactory and entertaining way the principles of bacteriology. Two chapters which, no doubt, will be of special interest to nurses are those relating to the Destruction of Bacteria, Sterilization and Disinfection, and the Technique of Preparations for and the Collection of Material for Bacteriological Examination.

THE PRINCIPLES OF IMMUNOLOGY. By Howard T. Karsner, M.D., Professor of Pathology, Western Reserve University; and Enrique E. Ecker, Ph.D., Instructor in Immunology, Western Reserve University. Pages 309. Philadelphia: J. B. Lippincott Co.

This book has no competitor in the English language. It is a concise and authoritative presentation of our present knowledge of immunology. In the preface, the authors state that the work is "designed primarily for students of medicine and for those

practitioners whose duties have made it impossible to digest a large mass of publications on the subject, the scope of the book is restricted to fundamental principles". As this book deals with such topics as Toxins and Antitoxins, Application of Complement Fixation to the Diagnosis of Disease, Hypersusceptibility, Prophylactic Vaccination and Vaccine Therapy it is evident that it will be of interest to any practitioner of medicine who is interested in the clinical side of immunology.

HANDBOOK OF ELECTROTHERAPY. By Burton Baker Grove, M.D. Pages 420 with 103 engravings and 6 plates of 12 charts. Price $4.00. Philadelphia: F. A. Davis and Co., 1921.

In this little book the author has attempted "to boil down the subject of electrotherapy and to treat it in a manner that it may be understood and made useful, not only to every electrotherapist but to the entire medical profession". The work is not a scientific treatise but men interested in the use of electricity as a therapeutic measure may find it of value. Many pages in the book have no place in a work of this character. For instance, forty-nine pages deal with the subject of blood pressure—the dietetic and drug treatment being included. The author's opinions on medical subjects, aside from electrotherapy, do not appear to be of great value. One has the feeling that the book was written to appeal more to the laity than to the medical profession.

DIAGNOSTIC AND THERAPEUTIC TECHNIC. A Manual of Practical Procedures Employed in Diagnosis and Treatment. By Albert S. Morrow, M.D., late Lieut.-Colonel, M.C., U.S.A.; Attending Surgeon to the City Hospital, and to St. Bartholomew's Hospital, New York City; Consulting Surgeon to the Nassau Hospital, Mineola, L. I. Third Edition, Entirely Reset, Octavo of 894 pages, with 892 illustrations, mostly original. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $8.00 net.

This book, written by a general surgeon, is now in its third edition. The author "has endeavored to bring together and arrange in a manner easily accessible for reference, a large number of procedures employed in diagnosis and treatment". The general practitioner or specialist desiring an intimate knowledge of diagnostic and therapeutic measures will not consult these pages. Every medical man, however, will find here clear cut descriptions of practical procedures which he may at any time be called upon to perform. The first one hundred and twenty-five pages deal with the various methods of inducing anesthesia; the remainder of the book takes up, in an orderly manner, the diagnostic and therapeutic methods which may be applied to the different regions of the body. The book is thoroughly practical and as an office reference book it covers a field peculiarly its own.

TRAUMATIC SURGERY. By John J. Moorhead, M.D., F.A.C.S., late Lt. Col., Med. Corps, American Expeditionary Forces; Professor of Surgery and Director of Department of Traumatic Surgery N. Y. Postgraduate Medical School and Hospital. Second Edition, Entirely Reset. Octavo of 864 pages, with 619 illustrations. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $9.00 net.

This second edition has preserved all the excellent features of the first edition. Medical men are all interested in learning to what extent they can apply to civil surgery the lessons learned in war hospitals. The preface of this book states that "the author is not of the opinion that the management of the injured has been radically changed by war experience". We can all agree, in large measure, with this opinion. Some surgical practices, however, like the treatment of septic joints, have been very radically changed. The author has included in this edition many of the lessons which he learned in his military service—he gives a very good description of the Carrell-Dakin technic, his details of the Willems treatment are clear, and he shows many splendid illustrations of Blake and Bulkley's suspension methods of fracture treatment. Well over a quarter of the book is taken up with the subject of fractures, and no one could find fault with these pages. Probably the most disappointing chapter in the whole volume is that devoted to the subject of burns: he does not mention the newer paraffine methods of treatment and he ignores the value of the thorough preliminary cleansing of the severer burned areas. He advises the use of a three percent Picric Acid solution, but unfortunately the solubility of Picric Acid is only one part in seventy-eight of water. The methods of nerve anastomosis pictured on page 667 are both obsolete and useless. His description of traumatic neuroses is especially valuable. It is interesting to note that, in his opinion, "epilepsy is a very rare sequel of head injuries". In discussing spinal cord injuries he says, "Reflexes are wholly abolished in complete lesions at and below the level of the damage; but later the reflexes increase"—the reviewer cannot agree that the reflexes ever increase, or even return, after a complete transverse lesion of the cord. This book, however, contains so much information that is of extreme value in an emergency that every practitioner should have a copy of it in his library.

SURGERY: ITS PRINCIPLES AND PRACTICE. For Students and Practitioners. By Astley Paston Cooper Ashurst, A.B., M.D., F.A.C.S. Associate in Surgery in the University of Pennsylvania. Second edition. Cloth. Price, $10.00. Pp. 1202, with 1143 illustrations. Philadelphia: Lea and Febiger, 1920.

This book can be highly recommended to anyone who desires a single volume text-book on surgery. Its illustrations are far better than those which adorn most of the pretentious works on surgery. The popularity of the book was proved by an early demand for this second edition. In a book of this size many important surgical conditions can be given but little more space than they receive in quiz-compends; therefore, it is a pity that Dr. Ashurst did not employ, for some useful purpose, the twenty-six pages wasted on Venereal Diseases as well as the forty-nine pages devoted to Gynecology. The author is a surgeon not a syphilographer, and for that reason he makes the statements that "the best way to administer mercury internally is in the form of the protiodide", and "the hypodermic injections of mercury salts have been found painful, dangerous and unreliable."

One is amazed to find a teacher of Surgery in the University of Pennsylvania advocating the discarded and utterly unscientific method of neuroplasty which is pictured on page 320. It is even more amazing to find him writing that "the nerves of special sense have no neurilemma" when, as a matter of fact, all the nerves attached to the brain, with the exception of the optic, are provided with a neurilemma. When discussing neuritis, alveolar abscesses and other foci of infection are not even mentioned. The treatment given for acute empyema thoracis is decidedly prewar—no mention is made of the Carrell-Dakin or closed methods of treating this condition. The Willems method of active mobilization of infected joints, one of the greatest products of war surgery, is likewise ignored. The statement that "Carcinoma is the most frequent affection of the breast" is not true.

The author's recent military experience should have qualified him to speak with authority on subjects connected with war surgery. However, his teaching, that "the stage of true gas gangrene has seldom been seen except shortly before the patient's death," does not correspond with the facts. He is correct in advocating the guillotine method of amputation for gas gangrene, but he is incorrect, in the reviewer's opinion, when he says "if the amputation is done near the trunk no tourniquet should be used, but the main vessels should be ligated and divided as the first step."

Despite the many teachings with which we can find fault this book will be a staunch friend to both students and practitioners.

GYNECOLOGY. By Brooke M. Anspach, M.D., Associate in Gynecology, University of Pennsylvania. Cloth. Price $9.00. Pp. 752, with 526 illustrations. Philadelphia: J. B. Lippincott Company, 1921.

This book contains an enormous amount of information in a comparatively few pages. It undoubtedly will find a place among the most widely studied textbooks of gynecology. Like all gynecologists, the author is inclined to enlarge the field of his specialty, he says "Gynecology is today so broad a subject that in order to deal with it exhaustively a series of monographs would be required". The reviewer does not believe that the proper field of gynecology could be covered by a vulvar pad, still he does feel that the author might have devoted to purely gynecological subjects the space given to appendicitis, intestinal stasis, gastroptosis, static backache, sacroiliac sprain, toxic arthritis and stone in the kidney. In an introduction, Dr. John G. Clark shows that he is greatly pleased with this book—the medical profession will be prone to accept Dr. Clark's judgment on a textbook of gynecology. The three chapters devoted to the Embryology, Anatomy and Physiology of the Generative organs form a very valuable feature of the book. The excellent chapters on Myomata of the Uterus and Malignant Tumors of the Uterus must be especially commended. One is rather surprised that no mention is made of the use of frozen sections in diagnosing cancer of the uterus. In the opinion of the reviewer, text-books should teach that the woman whose cancer is diagnosed from a frozen section, and whose operation immediately follows the diagnosis, has a better chance of cure than has the one whose operation is delayed until a specimen is hardened and fixed by the usual methods. The concluding chapter of the book deals with radium and roentgen-ray therapy: in the preparation of this chapter the author had the aid of Dr. Henry Pancoast—needless to say, the subject has received adequate consideration.

PRACTICAL PREVENTIVE MEDICINE. By Mark F. Boyd, M.D., C.P.H., Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Octavo volume of 352 pages with 135 illustrations. Philadelphia and London; W. B. Saunders Company, 1920. Cloth, $4.00 net.

According to the foreword, this book represents "an endeavor to briefly present the salient features of modern preventive medicine". The author has succeeded in accomplishing his purpose. The book is an admirable condensation of the more important works on preventive medicine and hygiene. The author certainly is correct in believing that this volume contains the minimum knowledge of the subject which a student of medicine or a practitioner of medicine should be expected to possess". The reviewer would suggest that the author could still further condense his book without impairing its value by omitting some of the illustrations. For instance, Fig. 29 showing a man in a rowboat and Fig. 59 showing a pasteurizer made by an Ohio machine company are of questionable educational importance.

ABSTRACTS

PROBLEM OF NARCOTIC DRUG ADDICT

The report of the Committee on the Narcotic Drug Situation in the United States, adopted by the American Medical Association at the Annual Session in New Orleans, 1920, and published by the Council on Health and Public Instruction as one of its education pamphlets, has shown that existing conditions relating to narcotic addiction constitute a grave menace to society. Since reputable physicians generally are compelled to plead ignorance of the facts regarding the addiction evil, because these cases are rarely encountered in ordinary medical practice, Alfred C. Prentice, New York (*Journal A. M. A.*, June 4, 1921), calls attention to some of the more important features of that report for the sake of needed emphasis. He urges that the states should enact legislation supplemental to and in harmony with the federal laws, which shall enable the exercise of the special police powers of the states, in cooperation with the federal authorities, in giving full effect to the clear purpose and intent of the Harrison law. Such laws have been written on the statute books in Massachusetts, Rhode Island and Pennsylvania.

Public opinion regarding the vice of drug addiction has been deliberately and consistently corrupted through propaganda in both the medical and lay press. Fallacies may be found in *American Medicine, Illinois Medical Journal, American Journal of Clinical Medicine, Medical Record, American Journal of Public Health,* Washington *Post,* Chicago *Tribune,* New York *Tribune,* New York *Times,* New York *World,* New York *American, Harvey's Weekly, New Republic, Metropolis* and others. Any solution of this vexing problem must necessarily resolve itself into some plan for abolishing the total supply of drug that may be available to the addict from any and all sources. There are two main sources of supply, viz., the pedlers, most of whom are themselves addicts; and the trafficking doctor, the narcotic practitioner, the "script doctor" who prescribes or dispenses the drug to them for self-administration. The pedler, who deals largely in smuggled drugs, constitutes a comparatively simple police problem, easily solved by thoroughgoing enforcement of existing laws. The doctor is more difficult of apprehension, for he hides behind the cloth of a reputable profes-

(Continued on Advertising Page xviii)

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Literature upon request.

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BALTIMORE

(Continued from Page 208)

sion, and pretends that he is treating a "disease" when he is really selling his professional privilege in a sordid market for a very large return in money. The remedy consists in abolishing the addicts' drug supply, first by prohibiting the prescribing or dispensing of these drugs to them by physicians, under severe penalty for such violation, and secondly through vigorous enforcement of both federal and state laws dealing with narcotic abuse. A physician who supplies narcotic drugs to an addict, knowing him to be an addict, or who connives with or condones such an act, is either grossly ignorant, or deliberately convicts himself as one of those who would exploit the miserable creatures of the addict world for sordid gain.

LESSONS IN MANAGEMENT OF DIPHTHERIA

The defects in the management of diphtheria among physicians, as shown by the study made by George H. Weaver, Chicago (*Journal A. M. A.*, June 11, 1921), may depend on several factors: failure to make cultures from sore throats; failure to administer antitoxin at once, and in every case which looks suspiciously like diphtheria, without waiting for the result of cultures, or in the presence of a single negative culture; failure to follow patients with sore throat after seeing them once; insufficient doses of antitoxin; failure to get the antitoxin quickly in contact with the circulating toxin; confusing diphtheria with other conditions. Of the reasons for the shortcomings of physicians in the management of diphtheria, Weaver says that lack of personal experience and infrequent contact with the disease are probably most important. He concludes that the important fundamental factor in further reducing the deaths from diphtheria must be education. The public must be taught to secure professional advice at the onset in every case of sickness attended with sore throat or with laryngeal symptoms. Some of the ways in which much can be accomplished are: personal instruction of mothers; carefully prepared articles, published in the newspapers in various languages, and disseminated as pamphlets; presentations on the moving picture screen, and instruction in school of the older children, who then become most efficient teachers of those at home. Like all educational efforts, in order to be efficient these must be continuous and carried out by persons with proper preliminary training. Much of this teaching must be done by physicians and nurses. Physicians cannot be too often urged to examine the throat in every case which shows abnormal conditions of the neck, and in every sick child to make cultures from all sore throats; to administer diphtheria antitoxin in all suspicious cases without waiting for cultures, or in spite of a reported negative culture; to follow up all cases of sore throat until diphtheria has been certainly excluded; never to rest content when one dose of antitoxin has been given in a case of diphtheria, but to follow the case closely until the disease has been certainly controlled; to inject all therapeutic doses of antitoxin intramuscularly or occasionally, in very urgent cases intravenously; to suspect every case of croup as one of possible laryngeal diphtheria, and to treat as diphtheria all such cases as do not promptly clear up. To encourage such lines of action, culture outfits should be so distributed that they can be obtained when wanted with little trouble or loss of time. It is a question in Weaver's mind whether it would not be best to discontinue the issue of all curative packages of antitoxin of less than 5,000 units and to make 10,000 unit packages readily available. The administration of the toxin-antitoxin mixture to all young children is to be encouraged; and if widely enough used, it should materially reduce the incidence of diphtheria.

BRONCHIAL SPIROCHETOSIS

During the last year W. A. Bloedorn and J. E. Houghton, Annapolis, Md. (*Journal A. M. A.*, June 4, 1921), have had three cases of bronchial spirochetosis and a fourth case in which the patient harbored the spirochetes, which were found following the course of a lobar pneumonia caused by the pneumococcus, and which persisted after recovery from the pneumonia. All of these patients were born in the United States, and while some of them had been outside the continental limits, it is safe to assume that their infection was contracted in this country. The authors suggest that bronchial spirochetosis is probably more widespread than is generally recognized. The disease, in its clinical aspects, is very suggestive of pulmonary tuberculosis, but usually can be readily distinguished from this infection. The routine examination of all sputums should include a search for spirochetes, and their presence should be regarded as significant, unless proved otherwise. The disease appears to be susceptible of transmission from an infected to a noninfected individual, although the degree of contagiousness is probably slight. An individual harboring the spirochetes in the sputum may present little or no evidence of the disease himself, and it appears that there exist carriers of *Spirochaeta bronchialis*. The disease, as a rule, responds readily to treatment, and the arsenical preparations, particularly arsphenamin or neo-arsphenamin, are very efficacious.

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ORIGINAL ARTICLES

SURGERY OF THE GALL-BLADDER*

LUTHER WILLIAMS, M.D.
INDIANAPOLIS, INDIANA

After a differential diagnosis of disease of the gall-bladder from the various upper abdominal diseases has been made, and medical treatment has failed, it becomes a surgical case. As to the exact time when the cases should pass from the medical to the surgical, this probably always will be a point of more or less contention, but the preponderance of evidence shows a much earlier time of change than formerly, as all surgical conditions are becoming much more readily recognized and treated accordingly.

Infections, malignancy, tumors and anomalous conditions produce practically all of the pathology of the gall-bladder and ducts, the most frequent being that of infection. The infection may be primary or secondary but it is primary by the time it demands surgical consideration, and will be the focus for so many systemic symptoms of which the patient complains and which go to make up the history of the individual case from which we get our first data of surgical significance.

With a thorough knowledge of the past clinical history the surgeon considers just what type of operation is best adapted to the individual case, and this will aid him materially in his first impressions as to choice; but it is not until the abdomen has been opened and a careful examination made that he can determine the operative procedure.

In cholecystitis we may or may not have stones. C. H. Mayo[1], the late Monyhan[2], Judd[3] and others claim that stones are present in fewer than fifty percent of all cases. It has been very much more noted recently by almost all operators that in cholecystitis, especially of long standing, the macroscopic evidences are clear of a pericholecystitis by adhesions to the surrounding structures. In the absence of gastric, duodenal or renal infections this alone is conclusive of the infection within and which has been transmitted through the circulation of the capillaries and lymphatics surrounding the gall-bladder. Removel of these adhesions gives a clear field down to the gastro-hepatic ligament, and by further dissection and opening the border of the ligament a clearer vision of the gall-bladder and ducts will be obtained, and this also will aid in determining the amount, if any, of obstruction produced by the head of the pancreas. With this exposure and a packing off of the colon that may crowd into the field from below, or the stomach and duodenum from the left of the incision, the liver brought down and turned slightly upward and rotated outward from the median line, the ducts are put on tension and exposed throughout their course. Keeping in mind the salient points of the past history, the operator will determine whether he will do a cholecystostomy, a cholecystectomy, choledochotomy, or a cholecystoduodenostomy.

From the time of our own Doctor Bobbs down to recent years cholecystostomy was the operation of choice, but there has been a recession until at present many of those that were drained are now removed. The conditions causing us to make the choice of drainage are mainly those of pus in the gall-bladder. That is extremely dangerous to remove from adherence to liver and surrounding structures for fear of rupture, with an obstruction along the common duct such as stone at or near the ampula, malignancy, tumor of head of pancreas, or an active pancreatitis producing a lasting or permanent obstruction to the flow of infected bile into the duodenum, the infection even extending back into the hepatic ducts, with or without stones along the course. These cases present all the marked symptoms of a systemic infection, the indications for treatment being that of the most complete and quickest drainage possible. The drainage in these cases should be of large tube type. It should extend over a long period of time—from three to six weeks—by keeping the tube in position after the retaining sutures have been absorbed, allowing a long continued flow

*Read before the Indiana State Medical Association at the South Bend Session, September, 1920.

(1) Mayo, C. H.: Mayo Clinic, 1917.
(2) Monyhan: Monyhan Abdominal Operations, Vol. II.
(3) Judd: Mayo Clinics, 1917-1918.

of not only the pus but of infected bile, with a possible complete restoration of tissue, and at the same time assuring the patient and relatives that this is the best surgical procedure under the circumstances, and with the possibility of the necessity of future removal of the gall-bladder. This operation has proven the best as outlined in the main, especially so in the extreme cases and those of old age. Deavers[4] reports that 4.07 percent of all his operations are secondary from drainage and mostly from stone reformation, showing the liability to reinfection with or without stone.

Again, reviewing the history of cases, we will find a vast majority of patients have complained of a long chain of symptoms, especially relative to the digestion, with or without pain and the resulting constitutional symptoms such as so-called rheumatism of muscles, joints, etc., which we have learned to recognize as localized manifestations of secondary infection with the primary focus in the gall-bladder. These may, but usually do not, have jaundice, usually slight with exacerbations. Macroscopically they will present in the operative field a gall-bladder that is not easily compressible with thickened walls, shrunken in size, or possibly larger than normal, with all the evidences of a long standing cholecystitis with its resultant peri-cholecystitis, extensive adhesions, strawberry and fish-scale variety, hydrops produced by obstruction of the cystic duct, glandular involvement extending down to the duodenum and head of pancreas. If pancreatitis it is usually of the chronic type with evidences of hardening and thickening. These cases may or may not have stones in gall-bladder or ducts. The best method of diagnosing these conditions after the exposure as outlined, is by passing the index finger of left hand down along ducts and through the foramen of Winslow with the thumb along and above the ducts, giving free access to the region of the head of pancreas and ampula.

For this class of cases having these symptoms in the main, with many variations that we learn by repeated examinations and past histories, the writer most assuredly would urge cholecystectomy. As to the guide for this choice, I wish to submit the classification of Monyhan in his last work:

"1. Injuries as rupture, stab or bullet wounds, gangrene, phlegmonous or membranous cholecystitis.

"2. In chronic cholecystitis with thickening of the walls with or without stenosis of cystic duct, and when shrunken, shriveled up and adherent.

"3. In distention, hydrops or empyema due to obstruction of cystic duct from any cause, or from mucous fistula from previous operation.

"4. In cases of fistula between the gall-bladder or cystic duct on the one hand and the stomach, duodenum or colon on the other.

"5. In multiple ulcerations of gall-bladder or cystic duct where stones have eroded their way through the walls into the liver, duodenum or protective adherent masses.

"6. In primary early carcinoma, strawberry or fish scale variety of gall-bladder."

Choledochostomy is indicated in the infections of the common or hepatic duct due to any form of obstruction that cannot be relieved by drainage of gall-bladder and where it is impossible to remove. Cholecystoduodenostomy will be of service where it is deemed not advisable to do either of the other operations, and will in some cases, such as malignancy or permanent obstruction to the flow along the natural channels, form a short circuiting of the bile into the duodenum, thereby giving temporary and occasionally prolonged relief.

The choice of operation should be decided upon the ultimate results we hope to obtain. In cholecystostomy we know that in a percentage of cases it is only the primary and will in all probability be followed by a secondary operation in the removal of the gall-bladder; but in a percentage of cases it will be preferable to take this course rather than to lose the patient by a removal at first. The next most important question is, What are the results after the complete removal? This can be answered first by the assurance that there will be no further possibility of the gall-bladder being a great focus of infection with its many resultant systemic manifestations; also that there will be a dilatation of the common and hepatic ducts and more or less of the remaining portion of the cystic duct as the operator may choose to leave. This dilatation is of a rather compensating nature and controlled largely by the pressure of the bile on one hand and the amount of obstruction by the muscle of Oddi at the ampula on the other. Judd[5] and Rosenau have both shown that the resisting power of the muscle has varied from 350 mm. water to as high as 600 mm. water. It was the writer's privilege twelve years ago to review the personal notes of the late A. O. J. Kelley wherein he had demonstrated the resisting power at the ampula to be 22 foot pounds in disproving the theory of the backward flow of the infection of the bile tract from the duodenum. This resistance of the muscle of Oddi and the counter pressure of the bile by the more or less peristalsis of the duct assumes the role of the gall-bladder until the patient usually feels no inconvenience from his loss.

(4) Deavers, J. B.: Surg., Gyne. & Obstet., 1917, XXV, 371-5.

(5) Mayo Clinics, 1918.

In order not to burden the Society with detailed statistics I wish briefly to give the history of just a few cases which, I am sure, are much the same as every operator encounters.

Case A. Mrs. S.; age 43; mother of five children. Complained of "stomach trouble" and had received medical treatment for same for seven or eight years previous. She gave a history of periodical attacks of severe chills with high fever following, each attack accompanied by severe pain which subsided in one to three weeks; otherwise healthy. On April 11, 1903, did a cholecystostomy, finding no stones; drained pus and thick, heavy mucus for five weeks with closure of fistula. Patient gained about thirty pounds and has been well since.

Case B. Miss E.; age 42. At time of first examination, March, 1912, gave history of having had attack of jaundice ten years previous which lasted for three or four weeks with slight pain followed throughout the intervening years with so-called "stomach trouble". On entering the hospital patient had no fever and complained only of the slight nausea; she had slight discoloration of the skin. March 21, 1912, I did a cholecystostomy, draining very dark bile which contained only colon bacillus, no stones. Drainage for four weeks; patient doing well; gained forty-four pounds during first year. About one and a half years later she had a recurrence of an infection, complaining of symptoms as before operation recurring at intervals of a few weeks.

The above are two similar cases, both of several years' duration before and after operation, one with a perfect result, the other with only temporary relief. The patient now shows no improvement, is very much discouraged, so much so that she refuses a second operation, and it is needless to say that such results cause more or less chagrin upon the part of the operator.

Case C. Mrs. H.; age 53; wife of physician. Admitted to hospital February 19, 1913. Temperature on admission, 104 4/5 degrees; had been at times delirious for past two weeks. On February 22, three days after admission, I drained the gall-bladder of six ounces of very black bile which proved to be purely streptococcic. This patient had typhoid eight years previous, followed by violent attacks at intervals of a few months. A drainage of six weeks gave the desired relief up to the present time. This patient being in an extreme condition, after an explanation to the husband and family the most speedy operation was decided upon, with the understanding of a possible secondary.

Case D. Mrs. M.; age 73. Was seen with Dr. M. F. Hart of Kirklin, June 3, 1914. Had been confined to chair and bed for more than eight months with pain in the region of gall-bladder; slightly jaundiced; had lost in weight from 120 to 82 lbs. After a careful history and examination I could only confirm the diagnosis made by Dr. Hart. June 21st gave one-sixth gr. morphine and 1-150 gr. scopolamine hypodermatically, with gas anesthesia by Dr. Cabalzer. We very gently and hurriedly removed four large stones, with large tube drainage; wound closed and patient put to bed with a pulse of 82; made a good recovery, this being done in patient's own home. July 1st of this year I had a report from her that she was able to be visiting relatives at that time and was enjoying unusually good health for one seventy-nine years of age. In this case a cholecystostomy with all the care and speed possible has proved a very satisfactory treatment.

From the reports (forty-nine) I have had from those patients who have had cholecystectomy, all have been very favorable with the exception of a very few (five) who are of sedentary habits, mainly office life, with habit constipation. Thinking the loss of gall-bladder possibly had produced it, it was relieved by treatment for the constipation.

My special plea is that the operative treatment be early; that the type of operation can best be determined by the surgeon after a thorough knowledge of the past history, taken in conjunction with the physical findings after the abdomen has been opened and a careful survey made of the pathology present; also that each type will be suitable to some case, but the vast majority of cases will do best with a complete removal of the gall-bladder.

DISCUSSION

DR. WILLIAM DAVIDSON (Evansville): From the amount of discussion that has been going on regarding cholecystostomy versus cholecystectomy it would seem there is still existing doubt as to the exact method of procedure in spite of the general weight having been thrown to cholecystectomy. I believe Doctor Williams in his summary has stated the case very well, that it is a consideration of the history and particularly the conditions after the abdomen has been opened. It is impossible to state beforehand what is best to be done, because many times, I am sure, every man who has been doing surgery of the gall-bladder is compelled to revise his decision in the fraction of a moment. Necessarily, it must depend on the findings when the abdomen is opened, on the physical condition of the patient and the presence of an active infection, and while no one desires to open the abdomen if there is evidence of recent infection, at times it does seem necessary. I

do believe that drainage, the usual cholecystostomy, has its place, but it is in the smallest percentage of cases that we are apt to use this. A number of years ago I tried, as nearly aseptically as possible, to aspirate after the drain had been in for two or three weeks, and was surprised to find the degree of infection still present. While the drainage had not relieved the condition, yet symptomatically these patients, after the fistula had closed, had been comfortable for months and even years, and all of us have known patients who have had a cholecystostomy years ago and have been comfortable ever since. The question arises if we are, from fear of complications, sometimes, and more on account of the patient, kept from doing a cholecystostomy more than we should. The thing we cannot get away from, however, is that a great many cases that are drained will go on for years without any trouble.

From the nature of the infection I do not believe, particularly in cases of cholangeitis, that ordinary drainage of the gall-bladder is sufficient. If any drainage is to be instituted it would be better done through long drainage of the common duct, and the Sullivan T-tube recently put out has been of very valuable assistance. Drainage in case of prolonged icterus is much better done that way than by drainage of the gall-bladder, and these are the cases which we find from observation are apt to develop subsequent trouble after drainage of the gall-bladder alone.

I think Doctor Williams has well made the reservation that while cholecystectomy is the operation usually performed, yet there are cases which must be drained and through the gall-bladder alone.

DR. G. W. H. KEMPER (Muncie): I am not an operator, but I would like to call attention to some historical things. In the Transactions of 1879—that is only forty-one years ago—I contributed an article to the Indiana State Medical Society on "Affection of the Gall Bladder Tending to Result in Cutaneous Biliary Fistula". In that paper you will notice that I dug up the article of Doctor Bobbs, which had slept for twelve years. I had a case at that time where the woman developed a tumor in the right side. It went along and we thought it was an ovarian tumor until finally, as we said in those olden times, it "came to a head" and opened, and sixteen gall stones were expelled—and the woman got well. This is interesting as showing the natural history of one of these cases before the present day operations were conceived, because Marion Simms did not coin the word "cholecystotomy" until after my case occurred. In that paper I predicted that cholecystotomy would be used in the future, as it has been. There are a number of cases mentioned in that paper. They were not treated surgically. If you have the paper in your library, read it! Improved methods of diagnosis and the surgeon's knife have done away with the cases I described.

DR. JAMES Y. WELBORN (Evansville): Doctor Williams reviewed conditions arising in the gall-bladder itself in contradistinction to the complications in the common duct that may require the removal of the gall-bladder even though the pathology in itself is not very great. I want to bring out this idea, that I have noticed the last few years that some gall-bladders apparently may be healthy though there is enough pathology to remind us that there is some trouble and confirm the clinical symptoms that the patient has had; and yet in searching the gall-bladder and going down to the cystic duct we find a hardened duct, reminding you of the grapevine condition that we find in the arteries. I believe this represents a class of cases distinct in itself. The clinical history in these cases is that of chronic symptoms, afebrile in nature. We will find there is a catarrhal condition in the cystic duct, and there is just enough force in the common duct to press the bile through, and it remains stagnant in the gall-bladder itself. Very few of these cases have stones; there has never been any real infection, but there is enough pathology there to produce a chronic condition. I think there is only one treatment for the condition and that is the removal of the gall-bladder, although it is not in a very bad pathological state. There may have been papers on that subject, but I have never seen much written about a contracted and hardened cystic duct. In bad cases of gall-bladder trouble you may find a normal cystic duct. The back pressure in the common duct is strong enough to force the bile into the gall-bladder, but there is not enough muscular strength in the gall-bladder to move this and therefore a slight catarrhal state ensues.

DR. A. M. HAYDEN (Evansville): This is a rather interesting subject to me simply because we are advocating leaving the gall-bladder in unless it is badly diseased. This opinion has been arrived at after doing gall-bladder surgery ever since it came into vogue years ago. Going back over the history of my cases I find about as much secondary trouble following the cases in which I have removed the gall-bladder as in those which I have drained. In fact, many cases I have operated on where the operation was imperative and had to be done rapidly, where we had a great deal of infection of the gall-bladder, with the idea of having to do a secondary operation to cure the case—we drained them for a week or two and the patient

got well and never had any more trouble, even though at the time I felt the gall-bladder would eventually have to be removed. In very few cases, I do not think more than one or two in all my years of surgery, have we had to do a secondary operation where I felt I was justified in leaving the gall-bladder at the time of the original operation. On the other hand, we have had several operations to do in cases where we had removed the gall-bladder, finding the common duct infected several years after the original operation. I do not believe we are justified in removing the gall-bladder unless it is in a pathological condition at the time of operation. I do not believe we are justified in removing the gall-bladder just simply because we have infection.

I call to mind a young lady who was in Washington (her father was a doctor) and was taken with a continued fever. When I saw her she still had fever and all the characteristic earmarks of infection somewhere, and I said it was infection of the gall-bladder; her father thought so too. This was eleven years ago. I said the thing to do was to drain the gall-bladder. We opened it up and drained it, she recovered from her fever and has never had any trouble since. I do not see where we would have gained anything by removing that gall-bladder. Take your cases of cholecystectomy, and if you had occasion to open them several years afterwards you will find that Nature has formed a rudimentary or new gall-bladder with the remaining portion of the cystic duct that will hold two or three ounces of gall. So when we have a gall-bladder that we do not have every reason to believe will give us trouble afterwards due to its present pathological condition, I believe we are beter off to drain than to remove it. Of course if you have a gall-bladder that is absolutely in bad shape pathologically, the only thing to do is to remove it at once. But while you may remove the gall-bladder you will not be free from subsequent trouble, because we have had just as much subsequent trouble following cholecystectomy as following cholecystostomy.

DR. E. E. PADGETT (Indianapolis): I wrote a paper on taking out the gall-bladder several years ago, and got a terrific calling down from Doctor Ross. While I have taken out a good many, and still do, probably more than I drain, yet I certainly must agree with Doctor Hayden that taking out the gall-bladder does not always free the patient from symptoms, and it is a question in my mind whether or not it is a cure. I have had a number of people who demand that the gall-bladder be removed, but I tell these people that I will answer that question when I get in. I think that is the only thing to do.

DR. H. A. DUEMLING (Fort Wayne): I am glad the last two speakers have taken the stand they did because I think it will start a good fight. I want to take the other side and say that I am in accord with those surgeons who do an ectomy by preference. Instead of removing ten out of one hundred, I remove ninety and drain the other ten. And I want to say this, that when it comes down to a rapid operation an ectomy has it all over the drainage proposition. You can, and I think we will agree that you can, more easily remove a gall-bladder and get rid at the same time of all the pathology, than you can open such a gall-bladder and put in a drain. In desperate cases, where you cannot afford to give the patient a general anesthetic, you can do the work under local, remove the gall-bladder and give the patient the advantage of this rapid operation and also, and this is the important point, remove a big source of infection and remove all the pathology. I do not believe anyone would leave in an infected appendix, provided it could be reached without great disturbance.

I cannot understand why dilatation of the common duct should be regarded as a pathological condition after the removal of the gall-bladder. I have seen dilated common ducts many times in cases I had occasion to reopen that had cholecystectomy some time previously. Of course the duct is dilated, but it forms something which is akin to a normal gall-bladder and in which, moreover, those chemical changes that occur in the gall-bladder occur as well as before.

Another thing I would like to call to your attention is the fact that adhesions that form in some cases are more abundant and harder to combat and give rise to much more trouble later than those that follow a properly performed ectomy.

In regard to the technique of an ectomy, whether you take the gall-bladder out from the fundus or at the cystic duct, I think that must be decided by the individual operator and his ability in tackling that bladder from one end or the other. I used to believe, and do yet, that beginning at the fundus you have the advantage of bringing the gall-bladder out where you can plainly see the cystic duct where it enters the common duct. You will find sometimes that duct enters the common duct and sometimes it goes around here, and there is always danger if you begin by ligating the neck of the gall-bladder that you will injure the common duct, which I think is obviated if you begin at the fundus and dissect down.

No one would offer an ectomy as a cureall. I do not believe anyone wishes to say that an otomy or an ostomy is a cureall. I do not feel that an infected gall-bladder, with or without

stones (we are not operating for stones, we are operating for the pathology that is producing stones) should be operated without exploring the common duct. When men like the Mayos tell you that they cannot rule out stones in the common duct, and adhesions, then I believe we will be safe in assuming that we had better look into this common duct. Time and again cases come back for operation that have had the gall-bladder drained, and then we find quite large stones.

And now in order to give everybody a chance at me I would like to say that I do not believe that stones reform. I think the stones that reform have been overlooked by the surgeon in ninety-nine percent of cases, and I think the reason for that is that the surgeon is satisfied to open the gall-bladder, and feels so happy when he hauls out fifteen or twenty or perhaps one hundred stones that he forgets to look into the common duct. I do not mean that this is customary, but I do not believe that gall-stones reform.

DR. WILLIS D. GATCH (Indianapolis): I would like to express general agreement with Doctor Duemling's remarks. In regard to the ease with which a badly infected gall-bladder can be removed, I entirely agree with him that a gall-bladder of that type is much more easily taken out and the patient has a better chance after removal than after drainage. I recall a case I operated in which the gall-bladder was tremendously distended, hard; no jaundice; leucocytes 18,000; slight fever. We had to drain off the fluid before we could remove the gall-bladder. It contained mucus and a little pus; smears showed no bacteria. That is one point I want to make—that in many of these gall-bladders which look terrible you find really very little septic material when you make a bacteriologic study. In a gall-bladder of that kind the structures are edematous and have the consistency of cheese, there is partial necrosis of the gall-bladder and cystic duct, and if you try to fight hemorrhage from such tissues you may get into a bad mess. With a gall-bladder of this kind, with a wall perhaps quarter of an inch thick, you cut down to the submucosa and with your finger enucleate the whole thing. Such a gall-bladder may sometimes be taken out without using a single ligature. In other words, instead of cutting the main stem of the cystic artery you divide your hemorrhage among the terminal branches and it stops without much trouble. I think the patient is much better off with the gall-bladder out than in. If you leave it in it means prolonged drainage.

I also agree with Doctor Duemling in regard to the cause of the occasional dissatisfaction with the result of operation. I believe the most important thing, more important than whether you remove the gall-bladder, is the scientific and complete exploration of the whole duct system in all cases who have been jaundiced. A good instrument for that purpose is an ordinary urethral bougee. Introduce that through the dilated common duct, shove it through into the duodenum and you can make sure by palpating along it whether or not there are stones. Some men insist upon prolonged drainage of the common duct, but I cannot see it. If you have the common duct open I do not see why the drainage of the bile into the intestine is not as good as draining it six or eight weeks out through the abdominal wall. In fact, I think it is better. I want to be sure that the common duct is open and then I want my fistula to close as quickly as possible.

As to the infection of the bile even in apparently perfectly healthy, normal individuals, the bile is often infected. Furthermore, not only is the bile infected, but the liver tissue is often infected. Bacteriologists have found that it is practically impossible, even at autopsy where there is an apparently healthy liver, to get out a piece which will not show bacteria. Why? Because the portal circulation is constantly filled with bacteria. They are doing no particular harm—the patient takes care of them. But if the resistance of the body gets poor, infection occurs.

DR. ALFRED S. JAEGER (Indianapolis): It seems to me that one of the reasons we have so much gall-bladder surgery to do is that we see these cases too late for any other form of treatment to do good. Just so long as the general practitioner will consider an "indigestion", or some other type of acute or chronic gastric derangement, to be due solely to changes in the stomach, just so long will we have gall-bladder cases in such shape that nothing but radical surgery will do any possible good. Just so long as the general practitioner makes a diagnosis of cholecystitis only on symptoms of jaundice, "coffee-ground" vomiting or bladder colic, just so long will we see these cases too late for non-surgical treatment. The fact of the matter is that some of the unsatisfactory results seen after operation is because too many men are doing gall-bladder surgery without proper training and do not know what they should do when they get to the case. If ever there was a field in surgery in which the surgeon needed to be a pathologist, it is in gall-bladder cases. Replying to Doctor Duemling, I wish to say that if I had gall-bladder disease I would be willing to have Doctor Duemling decide what was best to do, but he has had such exceptional opportunities, and has performed so many operations on the gall-bladder

that he knows his pathology, and what to do, and how to do it. But there are so many men operating on the gall-bladder who do not know what they find when they see it; who do not know how to decide whether to drain or remove, and when they do attempt to remove think they are doing a complete cholecystectomy when in fact they are only doing a resection, that as a result, the case frequently reverts to a pre-operative condition.

As to recurrence of gall stones, it may be that Doctor Duemling is correct, although it seems to me that the formation of a gall stone is somewhat analogous to the formation of a thrombus. A thrombus depends upon changes in the blood itself, the blood current or the wall of the blood vessels. So if we can be sure that gall stones are the result of some change taken place in the wall itself, then of course when the organ is removed or drained they are not likely to recur; but I am not sure that stones at times are not due to some condition of the bile itself, and if this is true, the same condition which caused them in the first place may cause them to recur, regardless of the surgery done.

I am very glad that Doctor Gatch mentioned the fact that practically all bile is infected. I am frank to say that I do not believe all gall-bladder inflammations are due to infection. The fact of the matter is the normal tissue has created an immunity and there is an underlying factor which excites the germ to activity, and when we have solved the problem of the true underlying cause we will be in better position to devise more successful treatment.

DR. J. C. FLEMING (Elkhart): This controversy of ectomy versus ostomy has been going on for a great many years and is not settled yet. There is no doubt that anyone who follows a considerable number of cases will find better results from ectomies than ostomies, and he will find there are other things to be taken into consideration. I think we should err on the side of conservatism, because if you remove a gall-bladder you cannot put it back, but if you do an ostomy you can take the gall-bladder out afterwards.

I want to mention two points that bear on this subject. A few years ago Doctor Case had a case at St. Luke's in which he demonstrated that the barium—an ectomy had been performed—actually permeated the capillaries of the common duct; in other words, that it went through the common duct into the small bile ducts. If that is true, why cannot food and everything else go through in some aggravated cases which follow ectomy?

Another thing, Ochsner makes the statement in the last Year Book that the patients who had an ectomy are coming back about three times as fast as those that have had ostomies, and that when such a patient has a recurrence, unless there are stones in the common duct, there is not much you can do. I think this question is not settled yet. I think we should err on the side of conservatism, and when we can, do an ostomy and use a large tube and drain at least four or five weeks. I remember Stanton followed Ochsner's cases a few years ago and found that those ostomies in which the gall-blader was sewed to the peritoneum, and the gall-bladder packed with gauze, had fewer recurrences than those drained with a tube. I do not know why, unless it was that they drained longer than those with the tube.

DR. W. H. WILLIAMS (Lebanon): There are advocates for both sides of this question, and both have good grounds for their belief. But I think looking over our work should largely be our guide in these cases. I mean to say that we should be conservative. We have a number of cases where the right thing to do is to drain, and we have a number where the only thing to do is to take the gall-bladder out. Just when you are to do one or the other will depend altogether upon the history of the case and the pathological condition that presents itself when you operate. I remember that Dr. John B. Murphy said one time that when you are doing a thing a certain way and are getting the results you want it does not pay to change. Of course I do not mean to say that we should never try to make "improvements", but I do mean that sometimes we allow the pendulum to swing too far to one side. If we have a large congested liver, with a gall-bladder whose wall is not thickened to amount to anything but which shows a sluggish condition, and filled with thick bile, probably this case will be better with prolonged drainage than to remove it. If you have a gall-bladder that shows the wall infected and thickened, probably surrounded by adhesions, it should come out whether it has stones or not. I think we all sometimes make the mistake of not draining enough. If we are going to drain a gall-bladder we should drain it well, put in a tube large enough so the infection can get out.

I agree with Doctor Fleming that as you look over the work that has been done you will find just about as much trouble with your ectomies as with your otomies, and I do not feel that we will ever get to the place where we can say that all gall-bladders ought to be drained or all ought to be taken out, but I do think that the points just mentioned will be a fairly good working guide. Mistakes have been made in both types of operation and we must still expect disappointment in the results in some cases.

DR. LUTHER WILLIAMS (Closing): Since writing this paper seven or eight weeks ago I have received reports from about twenty-five

cases that I might have put in this record. These replies from patients have run about in proportion to those I have recited.

Doctor Jaeger spoke of not getting these cases early enough. I wish to insist that we should have these cases earlier than we usually get them. They are treated for so-called "stomach trouble" until it is almost too late to do them much good at times.

I did not speak of technique in the paper because each man has his own technique, but in the various pathological conditions that we find the macroscopic examination taken in connection with the patient's history it seems to me is one of the best guides we can have.

We cannot remove all gall-bladders, and we cannot drain all of them; but taking the statistics of such men as the Mayos on the one hand, and Ochsner on the other, it is rather difficult for one to decide. But I believe the history of the patient and the condition at the time of operation is the best guide.

TRAUMATIC RUPTURE OF THE INTESTINE*

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The first case which I wish to report is that of Mr. I., a farmer, age 65, who was injured by a horse crowding him against a timber of the barn. The accident occurred while he was standing with his abdomen against this timber and the horse when either frightened or while in a playful mood jumped against him. He did not at first consider himself severely injured. He was able to complete the work at hand and only sent for a doctor after pain and vomiting became established, which was several hours later. By the time the doctor arrived the pain was severe and vomiting almost continuous. I was with this man more or less until the time of his death some seven days after the accident. As long as consciousness remained he suffered intense pain; the abdomen was greatly distended; after the first day there was no bowel movement; and he died, evidently as a result of diffuse peritonitis which was caused, no doubt, from a ruptured intestine.

Case II, another farmer, about forty years of age, who was injured while buzzing wood with a buzz saw. While standing in front of the saw, a piece of wood was accidently caught by the saw and hurled with much force against his abdomen. He was unable to continue his work and had to be assisted to his home, a distance of one mile. He vomited several times before we succeeded in getting him to bed, pain was intense, and there was considerable shock. This man lived but five days, dying with all the symptoms of a diffuse peritonitis. Here again it is reasonable to suppose that his peritonitis resulted from a rupture of some portion of the intestinal tract. These two cases came under my observation when I was but fifteen years of age.

Case III was seen by me with one of my associates. A lad ten years of age was kicked in the abdomen by a horse. For the first few hours it was not considered that the child was seriously injured and my associate did not see him until ten hours after the accident. At that time there was pain, rigidity, tenderness, and vomiting. Operation was advised but refused, as it had been counseled against by another physician. However, at the request of the family, the child's abdomen was opened some thirty-six hours later. There was present a diffuse peritonitis and a rupture of the ileum about eighteen inches from the ileocecal valve. The rent was closed and drainage established, the child surviving but a few hours.

Case IV, that of a soldier who was kicked in the abdomen by a horse. The accident happened eighteen miles from camp. He was cared for the first twenty-four hours by his organization, at the end of which time his condition became alarming and he was sent to the base hospital, where he arrived in a state of collapse, thirty hours after the accident. No operation was undertaken and he died the following day. Postmortem disclosed a diffuse peritonitis and a rupture of the jejunum, also profuse hemorrhage resulting from torn mesentery vessels.

Case V, that of another soldier who was thrown from a caisson landing on his abdomen on a stump. Pain was intense from the first. This soldier was rushed to the base hospital at once, where his abdomen was opened within four hours after the injury. A tear almost severing the jejunum was discovered and closed by a side to side anastomosis. In this case there was complete blocking of the intestinal contents by sharp contractions extending for a considerable distance either side of the rent in the intestine. This soldier made a very good recovery and went overseas with his organization.

Case VI, a farmer, age 46, kicked in the abdomen by a horse. Pain was intense from the first. He was seen by my associate, Dr. Kimball, within six hours after the accident. Patient was brought to the hospital and the abdomen opened. A rent about fifteen inches from the ileocecal valve was discovered and closed. Search was made for other lesions but none were discovered. Again, one was impressed by the little soiling of the peritoneal cavity. In this case, as in Case V, there were

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marked contractions of the intestine either side of the opening in the bowel.

This same phenomenon has been observed by several operators. In 102 cases collected by Bevy and Genseppi, in but five cases was there free gas in the peritoneal cavity. These contractions are Nature's attempt to prevent leakage and can last but a few hours, as they will soon be overcome either by exhaustion or by a distension from accumulated gases. This patient was able to leave the hospital within two weeks after the accident.

Case VII—A boy, eleven years of age, after eating a very hearty dinner consisting of potatoes, meat, bread and butter, onions, apple sauce, sweet corn, and several other varieties of food, when climbing a tree for buckeyes fell a distance of twenty-five feet. After falling twelve feet he struck his abdomen on a limb, bounded from the limb and fell the rest of the way to the ground. He was taken to the hospital where it was discovered that his left arm was fractured. As the boy was suffering severe pain in the abdomen which was distended and very rigid, it was decided that it should receive surgical attention at once. The abdomen was opened an hour and a half after the injury. As the peritoneal cavity was entered fluid and gas escaped with much force. We appreciated at once that we had to deal with a rupture of the stomach. This rupture, when located, extended from the lesser to the greater curvature, a distance of over five inches, midway between the pylorus and cardiac end. The tear was rather clean cut, and it was repaired with but very little trimming. The abdomen was cleansed with warm, sterile salt solution, but it was impossible to remove all particles of food. The omentum, which had become edematous, held in its meshes many particles of sweet corn, crusts of bread, meat, onions, etc. There had not been a great amount of hemorrhage. The boy was returned to the bed in fairly good condition, the pulse being better than when he went on the table. However, he soon became very restless and died with all the symptoms of shock about twelve hours later. No postmortem.

Definite knowledge of the pathogenesis of traumatic rupture of the intestines dates back to 1877 when Von Linquet proved that the bowel was ruptured as a result of being crushed between the contusing body and the bony parts and did not rupture as a result of increased intra-intestinal pressure, as was previously supposed. In 1887 Curtis not only collected 116 cases of traumatic rupture of the bowel but verified Von Linquet's conclusions. Of the 116 cases collected by Curtis, all had succumbed without operative interference. In 1888 Croft of England performed successfully an operation for intestinal rupture, as did Moty, an United States Army officer, a year later. However, as early as 1883, Bowsley made an unsuccessful attempt at surgical interference. In 1902 Gage collected eighty-five cases in addition to Curtis' 116. Forty-five of these cases were not operated upon and all died. Of the forty cases operated upon, seventeen recovered. Included in these eighty-five cases were five cases of his own. The only case operated upon within the twelve hour period recovered.

Pepper in 1919 operated two cases; one, one and one-half hours after the accident. This patient died two days later. Postmortem disclosed a second laceration not discovered at the time of the operation. The second case operated upon within six hours, in which there were also two ruptures, recovered. The same year Mr. W. H. Battle of England operated four cases, all except one being operated upon within the twelve hour period, and all recovered. One case operated upon twenty-four hours after being injured was mistaken for a case of acute appendicitis. This case was injured by falling upon a golf ball. In 213 cases studied by this operator, rupture occurred in the duodenum, 32 times; in the jejunum, 111 times; in the ileum, 59 times; and in but 11 cases was there an injury to the large intestine. Of these 213 cases, 73 were run over in the street, 28 were kicked in the abdomen by a horse, 25 received a crushing injury, 35 were struck by a moving body, 12 were injured by a weight falling upon the body, and 27 were injured by falling; all other causes, 13. In this series the accidents occurred in but twenty-one females.

Of the symptoms as a result of rupture of the intestine, the most constant will be found to be that of rigidity of the abdominal muscles. The abdomen will be in a state of immobility. Dullness may be present in either or both flanks, but is rather an indication of hemorrhage than escaped intestinal material. A sudden rise of temperature occurring within the first few hours is very indicative of rupture and is the result of chemical changes rather than infection. The next most permanent symptom will be that of pain, providing the patient is not unconscious. The pain will vary in character from a dull ache to paroxysms which will be excruciating. However, if operation has not been decided upon, opiates in any form should be withheld until a definite line of procedure has been chosen. Often a hypodermic of morphine will give to the patient a sense of false security, many times causing a postponement until grave and fatal symptoms have developed. In the presence of shock, it may be advisable to administer morphine. Vomiting is a frequent and a relatively early symptom. However, it may be absent until peritonitis is well established.

In case of shock, where active hemorrhage can be eliminated, surgical interference should be postponed until reaction has been established. Many of these cases will demand transfusion; therefore, every hospital should have a waiting list, properly classified and typed, who are willing to act as donors. Many times a desperate case can, by proper treatment and nursing, be transformed into a fair operative risk. As a rule, a blood count is of no value and the same may be said of examination of the feces, and as peritonitis develops within the first six hours, immediate action is imperative.

In the face of peritonitis, the death rate changes immediately from 15 to 85 percent. Therefore, if we are to save these unfortunates, we must be able to make a diagnosis before its appearance. There is but one way that this can be accomplished, and that is by exploratory laparatomy. A thorough, rapid, careful exploration of the abdominal contents, if no pathology is present, will not result disastrously to the patient. On the other hand, if a ruptured viscera is neglected, death is the inevitable result.

In concluding, we beg to submit the following summaries: first, in the presence of shock, treat the condition; if hemorrhage is present, control it. Second, a slight blow either directly or indirectly, delivered to the abdomen at a time when the abdominal muscles are relaxed, may result in a crushing rupture of one segment of the bowel. The section most frequently injured will be found lying immediately anterior to the spinal column. Third, two or more lesions may result from the same injury, therefore careful investigation of all intra-abdominal organs is necessary. Fourth, if the peritoneal cavity has been soiled, a thorough flushing with warm, sterile salt solution, and the abdomen closed without draining, will give the best results. Fifth, when shock is not present or but slight, and when in doubt, operate.

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DISCUSSION

DR. H. A. DUEMLING (Fort Wayne): The outstanding feature that the doctor brought out was the fact that it is not necessary when the intestine is crushed or lacerated that it contain an abnormal amount of fluid. The fact is that a blow on the abdomen, rather light, may produce a rupture, irrespective of whether the intestine is full or not. He called attention to the fact that contraction of the intestine is frequently seen on either side of the rupture. All of us who have done dog surgery and cut through the intestines with scissors have noticed how quickly the intestine contracts after injury, and it is the same with a human being.

I would like to call attention to another important feature, and that is the rigidity. This is not rigidity such as we see, for instance, in other peritoneal irritation; this is almost board-like. It is characteristic of ruptured abdominal viscus, whether intestine or gall-bladder. The fact is that the abdominal muscles take on a rigidity which is entirely foreign to other conditions. I am sorry to say that that is not always the case. I have had one case in my experience where I refused to make a diagnosis of rupture of the intestines because of the absence of that rigidity, which turned out to be a rupture.

Collapse and shock immediately following receipt of injury are also out of proportion when we compare the severity of the shock with that we see in other traumatic conditions. These patients are always in extreme shock, and if I disagree at all with what the essayist said I would like to say that a good big dose of morphine is the best way to combat shock, in my opinion. The pain is also of the excruciating type. Vomiting is a symptom which may or may not be present.

I would like to say also that it is not necessary that the abdominal muscles be relaxed at the time the blow is received. I recall a case where a man attempted to open a big monkey wrench. This wrench broke and suddenly hit his abdomen. I imagine that he was pulling hard and necessarily his abdominal muscles were in action. He fell to the ground and fainted, and was taken from the workshop to the office where he promptly revived and was then taken across the city. I saw him that evening and ladled out curdled buttermilk and a few other things from the abdominal cavity through the ruptured intestine.

I do not know, but I believe that the fact that the patient has a hernia plays a role in the production of rupture of the intestine when a blow is received on the abdomen. So many patients have hernia, and certainly a number of these will have rupture, though it may be a difficult matter to show any relation between the hernia and the rupture. I believe a man with a hernia certainly is more prone to rupture after receiving a blow on the intestine than a man without one.

I would also like to say that the intestinal contents which have escaped should be wiped out with a moist sponge. I do not believe in flushing, as that may carry the infection on;

but the contents of the intestine are not particularly infectious, and I am satisfied to sponge them out, close the wound, and drain the pelvis in the ordinary fashion.

An accident occurred in my practice which is unique. This patient had a gastric ulcer for which he was operated. He was not in good condition and we put in several silkworm gut sutures in order to get in and out and get him off the table. This wound did not close properly but allowed the intestine to work its way over the silkworm gut stitch and that stitch actually cut the intestine in two and the patient died. I mention that because it is an extraordinary occurrence.

I think the symptoms mentioned by Doctor Martin are sufficient in all cases to establish a diagnosis of rupture of the intestine, and I am heartily in accord when he says that it is a little better to open the abdomen when you are in doubt than to wait until everybody can see that your patient is slipping away and you have not been true to your duty.

DR. J. B. BERTELING (South Bend): I would like to lay particular emphasis on the fact that when you have a ruptured intestine you have absolute rigidity. Whether that rupture of the intestine be from direct blow, whether it be due to a duodenal ulcer, or whether it be even a gun-shot wound, it has been my experience that you have this rigidity. I have only had three or four cases, one a man who about five in the afternoon went into a neighboring saloon (this was seven or eight years ago) and with a traveling man had a cheese sandwich and some ginger ale. He had had some digestive trouble and within three-quarters of an hour he had violent pain requiring three-quarters grain of morphine to relieve, and at ten that night I saw him. He was perfectly comfortable, perfectly satisfied with himself and his surroundings, but he had an absolutely rigid abdomen, so rigid that I think you could have driven a truck over him and it would not have indented it. In taking the history of the case, together with the condition of the man—he had a slight temperature but no pain—I informed him he would have to be operated that night or I would refuse to call on him the next day. He consulted with his wife and decided he would be operated on. We took him to the hospital and at two that morning we operated. I made an incision below the umbilicus, and as I got down to the peritoneal cavity a lot of peculiar colored fluid came up, small yellowish particles which at the time I was in doubt as to what they might be. I could not imagine they were purulent, and as I went down a little farther I saw a streak of bile. I then closed the wound and went into the epigastric region, and in a very short time when I pressed in the region of the gall bladder some bile came out and some of these yellow particles. I had no difficulty in locating a ruptured duodenal ulcer, resected it and closed the wound, and the man made an uneventful recovery. But I want to lay stress upon the absolute rigidity of these muscles. I believe if I were called to a patient that presented symptoms of that kind, with pain, with or without vomiting, I would immediately go into the abdomen, and I think I would be justified in doing so. In examining some of these yellow particles that came out from the rupture into the pelvic cavity I found them to be cheese, and I suppose some of the fluid probably was ginger ale. It has been said that the reason the peritoneum is so resistant is because the fluid from the stomach is sterilized, but within six hours I can scarcely believe it would be sterilized; but the peritoneum is very resistant.

Another young man I operated on four or five months ago who had had duodenal ulcer since he was fourteen, and in his case there was no difficulty in locating the ruptured intestine, except that there was an enormous quantity of fluid and undigested food in the peritoneal cavity. However, it does not seem to make very much difference how much undigested food or how much material from the stomach has entered the peritoneal cavity, you can clean it out if you do it early enough and the patient will recover. After his case I was called to another man in the neighborhood who had been struck by a crowbar. He refused operation and I predicted he would die within two days. He was operated by another physician and I was present, but he had a gangrenous bowel and died within the time I indicated.

I simply want to lay stress on the fact that whenever you have an injury over the abdomen, whether it be a blow or from some other cause, a duodenal ulcer perhaps, if you have sudden pain and collapse and absolute rigidity of the abdomen, go into that abdomen. If you do not you will be guilty of neglect.

DR. DAVID ROSS (Indianapolis): Such a thing as falling back on exploratory laparotomy for diagnosis in ordinary circumstances would certainly be regretable, but in perforation of the intestine, from whatever cause, you are facing a condition of such imminent danger and the time is so short in which you must do something if you are going to do it at all, that it is not only allowable but imperative, and failure to do so, allowing your patient to die, is criminal neglect.

DR. J. C. FLEMING (Elkhart): I would like to report one case that proves that we can have a peritonitis even without rupture of the intestine. About a year ago a blacksmith who had

a hernia and wore a truss was shoeing a mule. At the point where this hernia was, the mule simply pushed him—it was too near to kick—and a fold of the abdomen was caught between the hernia and the truss. The man suffered a great deal of pain, went home and remained the rest of that day, but the next day went to work. He worked part of that day and went back to bed and called a physician. I saw him five or six days after that when his pulse was almost imperceptible and he had a distended and rigid abdomen and all the signs of peritonitis, too late for any hope by operative interference. I advised them to let him die in peace, which he did that night, and the following morning we did a postmortem and found a generalized peritonitis, and a most careful search of the entire intestinal tract failed to reveal any evidence of rupture or any perforation whatever; still he had a general peritonitis. Just how that happened I do not know, but the intestine may have been pinched between the hernia and the truss in such a way that micro-organisms could travel through the bowel wall, for there was no perforation.

DR. GEORGE D. MARSHALL (Kokomo): I had a ball player at Kokomo about eight years ago who was struck in the right abdomen by the knee of a runner. This man developed all the symptoms of peritonitis and died within forty-eight hours, although at postmortem there was no rupture of organs to be found anywhere. Apparently it was a traumatic peritonitis.

DR. WILLIS D. GATCH (Indianapolis): To my mind there is a relation between hernia and rupture of the intestine. I saw a case in which such relationship was shown at operation. The patient had a small left inguinal hernia. One morning when going to work he ran to catch a street-car and jumping to catch the car strained himself in some way and felt a sudden agonizing pain. It happened within a block of the hospital and he was taken there at once. He had this hardness of the abdomen that has been described and that was about all, except vomiting. He was operated at once and a loop of the small bowel found which had been torn clear across. I think this case is absolute proof that without a blow it is possible for a man who has hernia to sustain a complete rupture of the intestine.

The question which often arises in this connection in industrial work is whether there is such a thing as traumatic appendicitis. I am often appealed to in regard to that question. Personally, I have never seen a case in which I was convinced that the appendicitis resulted from trauma, but theoretically I think it is possible. Suppose you had a chronic appendicitis with the appendix coiled around the head of the cecum, and then suppose the patient sustains a sudden blow in the abdomen so that a volume of gas is thrown into the cecum, I could conceive that the cecum would expand in such a way as to tear the appendix and produce true traumatic appendicitis.

DR. H. H. MARTIN (closing): There is one point that I wish to emphasize and that is, the importance of not giving morphine when dealing with an acute abdomen until a definite line of action has been agreed upon by the patient or the patient's family. Not infrequently a single hypodermic will lull the patient and family into a sense of security until golden opportunity of early relief has passed and disaster follows.

Rupture of the intestine frequently results in the presence of hernia when a loop of intestine is occupying the sac at the time of trauma directed against a hernial protrusion. The majority of these cases give a history of hernia as well as that of wearing a truss.

Again I wish to emphasize that it is possible to save eighty-five percent of these cases, but if so it necessitates early action.

THE SYSTEMIC REACTION OF THE ROENTGEN RAY

A CURE FOR ARTERIO-SCLEROSIS?*

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Following the administration of a massive dose of Roentgen rays to any considerable body area, there occurs (among other things) a lowered systolic pressure of varying degree and promptitude, depending on the dose administered and the skin or body area which receives this dose, and it is also varied by the region exposed to the rays. This lowered systolic pressure lasts for a variable period, which likewise is in proportion to the dosage. The reaction period lowered pressure lasts from 3 to 5 days with a patient of previously normal pressure, after which period it returns to normal and remains there; while with the arterio-sclerotic patient there is a drop of varying degree from the usual, and there is never any return to the former high mark. My studies of this effect have been incidental to the treatment of deep seated cancer with the massive filtered doses of Roentgen rays. My earliest observations were that following such treatment there was a period of mental depression, malaise, anorexia, ataxia and constipation.

A succeeding observation was that each of these patients experienced a fall of systolic pressure more or less decided, and I have naturally made an ensemble of these observations

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which gave rise to the speculation as to whether the general malaise noted was produced by the fall in blood pressure, or the malaise and fall in blood pressure were occasioned by one and the same agent, namely, the chemical effect of the Roentgen rays.

After determining these facts I have systematically hospitalized all patients during each series of treatments with heavy x-ray dosage, keeping them recumbent in bed until the acute systemic reaction period has passed and the blood pressure again is mounting. These observations extended through two years ending in July, 1917, when they were interrupted by my joining the Army Medical Corps for the war. I recommenced in September, 1919, on my return to practice, and now have the advantage of observations of two patients who had this reaction in the months of September and November, 1916, and whose present condition of lowered pressure and improved nutrition and strength gives me cause to believe that in this systemic reaction we have an agent of remarkable value as a treatment for arterio-sclerosis.

PATHOLOGY AND MANIFESTATIONS OF ARTERIO-SCLEROSIS

It seems advisable to digress at this juncture from the primary subject matter to a brief consideration of the pathological manifestations of arterio-sclerosis. The disease is made manifest by impaired nutrition and elimination, a dry, hard and non-elastic skin, and certain mental symptoms, all of which are in proportion to the state of the disease. There is more or less dyspnœa on exercise and this is also produced by lowering of the barometer, the more so when there is involvement of the coronary artery and aorta. The direct tissue changes are marked thickening of arterial walls, and later a calcareous degeneration with corresponding loss of elasticity. The advanced state of the disease is readily demonstrable by roentgenography. Adami objects to the name of this disease, urging that it is neither adequate nor comprehensive.

The cause of arterio-sclerosis remains the subject of dispute, theory and conjecture. Many of the theories of disease causation are the result of half baked or quite raw conclusions on the part of someone who arrives at them by first taking an arbitrary or academic stand and then trying to substantiate, a process in which there is no more sense than for a detective to seize someone on suspicion or assumption that he is the criminal and then proceed to follow his clues and collect the evidence necessary to convict and thereby justify the blunder. Syphilis and alcohol have thus been indicted for the crime of arterio-sclerosis. This seems consistent, for they have been charged with causation of practically every other more or less obscure disease, so why not with arterio-sclerosis.

In my personal observations, which, needless to say, cover many cases other than the few I shall report herein, I have found no evidence that either syphilis or alcohol are productive of this malady, and Cabot, after extensive clinical data, acquits alcoholism as a causative factor. Adami believed that overeating is productive of the disease. I make bold to suggest that auto-intoxication resulting from over-eating and constipation is the cause of the majority of cases.

KNOWN PHYSIOLOGICAL EFFECTS OF THE ROENTGEN RAY

Since the x-ray reduces intra-arterial pressure, questions at once arise as to the physiology involved. The researches of Sir Oliver Lodge and Cleaves are to be credited with the discovery that the x-rays have a direct physiological effect on the human organism, but whether or not they give a solution to the problem now to be considered I leave to the judgment of the reader. The writers named have shown first and others later, that all of the short wave length rays have a marked power of oxidation and ionization, and that this power is increased progressively toward that extremity of the spectrum: that the blue and violet rays are but feeble in this respect but the power progressively increases through the bi-violet and x-ray or tri-violet steps of the spectrum. Lodge says the x-rays act most vigorously on active cells in which changes are occurring, therefore the effect is greater on the dermis than the epidermis. Both Lodge and Cleaves believed prolonged exposure to x-rays to be disastrous to hemoglobin. Maute's researches showed that a single exposure to x-rays produced a marked leucocytosis with an increase in both colored and white corpuscles.

Clinically I observe a paresthesia of the treatment area, lasting a variable period, but usually greater than that of the skin reaction. This is more than superficial, for I have seen a cancer patient who also had tic doulouroux go entirely free of his tic during a reaction period lasting several weeks. There is in some cases a pre-reaction erythema appearing during the treatment and lasting from a few hours to two days. I have frequently heard of nausea as a part of the systemic reaction observed by other roentgenologists, but in my own experience this symptom does not occur. It is attributed by some roentgenologists to the production of large quantities of nitrous oxide by ionization. I obviate any possibility of this occurrence by forced and full ventilation, keeping the patient warmly wrapped.

The modus operandi whereby the blood pressure is reduced is speculative, and may remain so. If it is difficult to know how the intra-arterial pressure is reduced temporarily for the patient of previously normal pressure, it must be still more difficult to determine a satisfactory explanation why with the arterio-sclerotic patient, the pressure is permanently lowered, all symptoms permanently alleviated and, in short, a symptomatic cure produced. Nevertheless, my observations indicate that such is true.

REPORT OF CASES

Case 1. Man, aged 74. First an army officer, then a merchant, and for 10 years last past, secretary of a manufacturing company. Came under x-ray treatment for deep seated sarcoma of left hip. A consulting surgeon believed him inoperable by reason of advanced age, the state of his circulation, and general poor health. I had previously treated him for arterio-sclerosis, having used ineffectually the auto-condensation method which would induce a reduction of his pressure, slight perspiration, amelioration of dyspnœa and other symptoms, but the benefit was only temporary and at the end of 3 or 4 days, even if the atmospheric conditions were favorable, his pressure would again be at its maximum. Treated Aug. 20, Sept. 20, and Dec. 31, 1916. All three treatments were of the massive, filtered x-ray dose.

On the first date he was treated for 10 minutes at 14 inches focal distance with 18 milliamperes of current through a filter of 6 millimeters of aluminum, and 8 layers of chamois skin. Up to the time of this treatment the patient had a systolic pressure of about 200, poor appetite, violent headaches and constipation, a dry, hard, non-elastic skin and could not tolerate cold, nor even the coolness of summer nights. I continued observation of his arterial condition, expecting to again resort to the auto-condensation method but found his pressure reduced on the day following the x-ray dose to 170. At date of second treatment his pressure had reacted to 180. Second treatment Sept. 20. Technique: 20 milliamperes, 18 inch distance, 9 inch spark gap, filter, 6 millimeters aluminum, 1 layer sole leather, 4 layers chamois skin, time 30 minutes. On the day following the systolic pressure was reduced to 160. It had reacted to 175 on the date of the 3rd treatment, Dec. 31. Technique of 3rd treatment, 20 milliamperes, 18 inch focal distance, 9 inch spark gap, filter, 6 millimeters of aluminum, 1 layer sole leather, 4 layers chamois skin, time 30 minutes. On the following day his systolic pressure registered 150. From the date of his first x-ray treatment, all of his symptoms had improved, and the improvement continued progressively. His appetite and nutrition improved, his skin assumed a sort of rejuvenation, his headaches ceased and his ataxia disappeared. He no longer suffered from dyspnœa on exercise or at times of falling barometer, and his wakefulness was ended. There appeared to be a complete symptomatic cure, which I did not then hope could be permanent. Whether or not it is permanent I leave to the judgment of the reader. In July, 1917, his systolic pressure registered 160; in July, 1918, 160; in September, 1919, 165; in July, 1920, 170. And from his first treatment to date of this report there has been no recurrence of his symptoms.

Case 2. Man, aged 79. Banker. Carcinoma of foreskin, duration 4 months. There had been excision of the lesion with prompt recurrence. There was no metastatic involvement determinable. A well built man weighing 180 pounds. Occupied daily in a bank. He had walked to and from the bank a distance of about 1 mile, and stated that this was increasingly difficult. Dyspnœa caused quite a distress when he appeared at my office. On that date, Nov. 8, 1916, he had most of the subjective and all of the objective symptoms of arterio-sclerosis. Systolic pressure was 206 and a pulse of 112; a pump stroke pulse. He was treated with the intensive soft ray dose to the lesion, the filtered massive dose to the penis and to each inguinal region, on Nov. 8, 1916. The technique of the treatment of the inguinal regions was 18 milliamperes, 15 inch focal distance, 9 inch backup, filter, 5 millimeters aluminum and 1 layer sole leather, time 20 minutes. There was no skin reaction resulting from the treatment. The hard ray dose to the penis was repeated on Jan. 7, 1917, although the lesion had disappeared and a cure was believed. Under effect of his systemic reaction his systolic pressure dropped to 160 and later reacted to 170, which he registered on Jan. 7, 1917, two months after his initial treatment. His heart action improved correspondingly, appetite, nutrition and elimination became normal and dyspnœa no longer occurred. Has continued his vocation to this time. I sought an interview with him and on July 29, 1920, I found him with a pressure of 180. He stated to me that his appetite was uniformly good, his digestion and elimination perfect, that he slept well, never suffered shortness of breath except on violent exercise and that he perspired as freely as in his twenties. I deem it proper to direct attention to the fact that this man is now 83 years old and that the sole treatment he has received, capable of affecting his blood pressure, was the prophylactic massive doses to his inguinal regions on Nov. 8, 1916. His usual medical attendant thinks he is in perfect health.

Case 3. Man, aged 64. Carcinoma of lower lip at muco-cutaneous margin involving almost the entire margin and invading the inner labial surface. Metastatic tumor in left sub-maxillary gland. Had been a victim of rheumatic fever from which he had never entirely recovered; much stooped from rheumatic sequellæ in upper part of spine. His treatment consisted of a massive filtered x-ray dose to the entire jaw and the intensive soft ray dose to the lesion, followed on the succeeding day by destruction of the salient lip tumor with the electro-cautery.

At the beginning of his treatment his systolic pressure registered 180 and his skin was dry and hard. There seemed a great probability of additional metastasis, undeterminable at that time, for which reason I gave a doubtful prognosis and proceeded to treat him to the limit of tolerance of the skin with the massive filtered x-ray dose, using a technique generally similar to that reported heretofore. First treatment Jan. 26, 1920; on the following day systolic pressure was 155, reacting to 160 on Feb. 1. Treated Feb. 2; on following day systolic pressure was 130, reacting to 155 on Feb. 17. On March 2 it registered 155 and on March 10, 160. Treated March 17; on following day his systolic pressure was 120; March 20, 140; April 13, 120, and on April 29, 155. Metastasis had developed in the right sub-maxillary gland and on May 11 it was resected, having been treated on the previous day with a very heavy massive dose, since which time he has had no further treatment. Following this reaction his systolic pressure registered, on May 29, 140; June 11, 145; July 29, 142. During this treatment his skin has become normal in appearance and function, his appetite and nutrition have improved and he is steadily gaining weight.

Case 4. Man, aged 76. Carcinoma, left side of neck, a very large lesion of 12 years' duration. Patient was quite feeble; had poor appetite, digestion and elimination, a dry, hard and non-elastic skin, a distinct mitral regurgitation and a pulse of 112. He had a systolic pressure of 180. Treated April 5 and 6 with the massive filtered x-ray dose according to the technique used in the previous cases except that the dose was divided, half being given on successive days for the reason that I feared to give him the maximum dose at a single treatment on account of his heart lesion and his feeble condition. After an interval of 5 hours following the first half of his dose his intra-arterial pressure had fallen to 166 and his pulse to 90 and he showed no ill effects, but to the contrary, showed evidence of comfort and well-being. Following the second half of his treatment his pressure fell to 155, and reacted to 160, 48 hours later. His appetite improved and his skin at once became active. He remarked at the time that his palms were moist for the first time in several years. Following a treatment on April 8, with the intensive soft ray dose to the lesion, there was a slight lowering of pressure but it reacted within 48 hours to 160, at which point it held quite steadily until June 7, when he was again subjected to the massive filtered dose. After an interval of 24 hours his pressure dropped to 145, reacting within a few days to 160, at which it remains. There was immediate and marked improvement in the rate and volume of his pulse, continuing to this time. He is greatly improved in vigor and has gained several pounds in weight.

The two latter cases, 3 and 4, are of too recent date to be of distinct value in themselves and would not have been reported except in sequence to the others which date from 1916. They are to be taken for what they are worth in the judgment of the reader. As a result, however, of my observation of the older cases, I have every reason to expect a permanent reduction of intra-arterial pressure in the latter cases.

I shall not attempt to elucidate the chemical or physical action by which intra-arterial pressure is reduced by the Roentgen rays. Any effort on my part toward solution would be purely academic. It may be that it will never be satisfactorily explained; but if it cannot be explained, we may console ourselves with the reflection that there are many other things which are of great service to humanity which are likewise unexplainable. I dare to hope that here is a new field of usefulness for the Roentgen rays, which, though its action may never be explained and may remain in a manner empirical, will serve as a curative agent for a malady for which there have heretofore been remedies of only a palliative character.

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DISCUSSION

DR. CHARLES GRANDY (Fort Wayne): I think Dr. McCoy has brought out a very interesting thing in the effect on the blood pressure. It seems from this treatment that we are not attaching much importance to the effect on the arteries. In looking over the cases you notice that he does not pick out any special place to treat them for the pressure, but simply treats the lesions. It seems to me there ought to be some place on the body, if it is to be used for the pressure, where we could put the rays and so get a marked reduction. It seems to me we

cannot explain the reduction of blood pressure from the Roentgen ray itself in these cases, when one had a lesion in the ear and two in the joint. Another thing, we are using a very dangerous method, and if everyone tries to use it there will be a lot of disastrous results that will be worse than those from high blood pressure.

DR. GRACE LINE HOMMAN (Laporte): In looking over the literature I find that Portaine, in 1913, spoke of the beneficial effect of the Roentgen rays on high blood pressure. In 29 subjects treated, only four after slight improvement returned to their original pressure and remained there. Of the remaining number, some were cured and some showed considerable improvement. In the arterio-sclerotic group with albuminuria he thought the treatment was contraindicated.

I know more about the action of radium than I do about the Roentgen rays. We found in using radium that we had to be very careful in the cases that had nephritis. Some had very severe reactions and some developed uremia and died.

THE ASSOCIATION OF FREE HYDROCHLORIC ACID AND GASTRIC MOTILITY IN GASTRIC DISEASES*

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There are certain statements handed down from year to year by the recognized authors, associated with the diagnosis of gastric diseases, so firmly established that we find it almost impossible to get away from undue reverence of their reliability on the subject in question.

In the time allotted I will try to refute, from my own personal experience, a few accepted symptoms, clinical and laboratory findings, used in the diagnosis of gastric diseases.

My observations cover some 400 cases of gastric diseases seen while stationed at Base Hospital, Camp Shelby, Miss., plus the cases seen since my return to civil practice. These cases range from acute and chronic gastritis to acute and chronic peptic ulcer.

Pawlow's work on the phenomena of secretion has cleared up many errors of the older observers, and has given to us a fuller understanding of this important physiological function. He proved in his experiments that stimulation of the peripheral end of the severed vagus, in which are the secretory fibers of the gastric glandularis, produced a secretion of gastric juice, even after a latent period of several moments. By producing a fistulous opening in the œsophagus of a dog, so that the meal never reached the stomach, it was found that the meal caused an abundant flow of gastric juice as long as the vagus was intact, but when the vagi were severed the false meal did not produce this abundant flow of gastric juice, therefore proving that we must consider to a great extent the effect of the sensations of taste, smell, sight of food, thought of food within the mouth, as reflexly stimulating the secretory nerves of the vagus. This is due to conscious sensations. Under normal conditions as long as food remains in the stomach the gastric juice is secreted proportionately to the quantity and quality of the food. There are certain substances contained in foods which are called secretogogues, which are capable of stimulating further secretion; how this is brought about has not been explained to the satisfaction of most of us, but its effect on the mucous membrane is supposed to produce a substance known as gastric secretin, which is taken up by the blood and carried to the gastric tubules, stimulating their activity. Pawlow shows in his work that the gastric secretion is continued until all food has left the stomach and also for a short time longer during digestion in the small intestine.

In studying the gastric motility we find the first movements of the stomach during digestion are the rythmic contractions of a peristaltic nature that begin slightly in the fundus and pass with increasing force to the pyloric region; in this the circular fibers are the most active. The result of these movements is to mix the food with the acid gastric juice which reduces the food to a thin liquid mass—the chyme. The pylorus then opens and this fluid mass is delivered into the duodenum in small jets. According to Cannon, this irregular act of the pylorus occurs in the human about every twenty seconds and is dependent upon the acidity of the chyme and the consistency of the food directly inside of the pyloric valve at that time. Bassler has shown by x-ray and gastric analysis in atrophic gastritis with anacidity that the food or chyme emptied, and that the pyloric opened as readily as when acid chyme was present. This is at least an argument for some other theory in regard to the opening and closing of the pylorus.

We have always been told by the authorities on gastric diseases that whenever hyperchlorydia is present, we may expect to find hypermotility, and associated with hypochlorydia—hypomotility. Barker tells us that "If stomach contents are more acid than normally, the hyperacidity might arise, (1) From increased amount of gastric secretion (hypersecretion); (2) From qualitative change in the acid strength of the fluid secreted; (3) From increased motility of the stomach leading to early removal of the

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ingested fluid that ordinarily mixes with the scretion and diminishes the acidity—(hypermotility)."

Einhorn, Riegal and Ewald tell us that hyperchlorydia is a very common factor in ulcer of the stomach, while Kemp says that "hyperchlorydia occurs in 95 percent of all gastric ulcers and that hypermotility is always present, providing there is no complication."

Hypersecretion and hyperacidity have long been associated with chronic duodenal ulcer. Dr. Will Mayo says of duodenal ulcer, "The symptomatology of duodenal ulcer is so well known that in the typical cases failure of diagnosis should not occur. The hunger pain, food relief, hypersecretion and hyperacidity, leave little doubt as to the character of the lesion." Boas and Kemp also tell us that hyperchlorydia is invariably the rule in duodenal ulcer.

The Rehfuss technic was used in all tests for gastric analysis—using the intervals 30, 50, 60 minutes, up to three-hour interval. All cases had from six to ten analyses, taken at different periods of the twenty-four hours. Tests were made for free HCl, combined HCl and for total acidity.

Motility was determined in all cases from fluoroscopy and x-ray examinations.

In acute gastric ulcer, where the symptoms indicated the first attack, we found hyperchlorydia in 60 percent of the cases, but associated with this we found hypomotility—demonstrated chiefly by the fluoroscope.

In chronic gastric ulcer, irrespective of location of ulcer, we found hypochlorydia with hypermotility; in 80 percent of the cases, also in chronic gastric ulcer, where we had hyperchlorydia we found hypermotility—rather suggesting that the motility is not in any way due to the increase or decrease of free hydrochloric as found in chronic gastric ulcer.

In chronic duodenal ulcer we found hypermotility in 75 percent of the cases with hypochlorydia or *achylia gastrica.*

In our true achylias we found hypermotility present in all cases.

In acute and chronic gastritis, irrespective of cause, hyperchlorydia and hypomotility and hypochlorydia with hypermotility was the usual combination.

Case No. 10. Male, age 19. Aug. 1918. F. H.:—F. L., M.D.—Cause unknown. Past H.:—Usual diseases of childhood. Has been troubled with stomach for years. Had to be careful of his diet. Could not eat sweets. Present history:—Entered army July 10, 1918. Tried to drill but could not on account of increased stomach disturbances. Entered hosp. Aug. 1, with sick stomach, vomiting and pain in the epigastrium. Pain was dull in character and rather constant. Sometimes relieved upon taking food, but at other times it would increase the pain. During the last three weeks the patient has vomited after each meal. Physical examination:—Poorly developed and anemic. Tender over upper abdomen. Could feel no mass. Gastric analysis:—Free HCl—45. Total—60. Free HCl—30. Total—50. Free HCl—30. Total—50. Free HCl—0. Total—35. Free HCl—10. Total—35. Fluoroscopic and x-ray: Hypermotility. Pronounced cap. Small ulcer on ant. surface of the stomach, near pylorus. Diagnosis:—Gastric ulcer, chronic. Held for obs. for six weeks. Continued to vomit on liquid diet but had less pain. At no time did we find blood in g. c. or in stool exam. Discharged S. C. D. Sept. 1918.

Case No. 56. Male, age 28. July 1918. F. H.:—Negative. P. H.:—Usual diseases childhood. Malaria—1912. Stomach trouble for seven years. Present history:—Entered hosp. July 30, 1918, complaining of pain in the epigastrium with nausea and vomiting. Has been worse since June due to his entry into the service, where he was compelled to drill and eat coarse food. Has vomiting after meals with gradual loss of weight. Physical exam.:—Tender over stomach area. No mass. Gastric analysis:—Free HCl—0. Total—30. Free HCl—0. Total—30. Free HCl—0. Total—10. Free HCl—10. Total—30. Free HCl—10. Total—40. Fluoroscope: Hypermotility. X-ray: Small ulcer on ant. surface, two inches from pylorus. Diagnosis:—Gastric ulcer, chronic. Patient improved under rest and treatment. Later transferred to non-comb. unit.

Case—MOULTON. Age 63. F. H., Negative. Past H.—Usual diseases childhood. Tonsilitis very frequent. Typhoid as a young man. Swallowed carpet tack when about thirty years of age. Had pain in abdomen for some time after this. Had an epithelioma of lower lip in 1904. Present history:—Has had trouble with stomach for 40 years, with occasional pain in epigastric region—these were periodical. As time passed pain was more frequent and a little more severe. Has had some burning in stomach and some hot water brash. Present complaint:—First symptoms of trouble was dizziness and nausea, then in about ten minutes bowels felt like they wanted to move. Contents of bowel movement was livery, black and tarry. Following this he became deathly sick and vomited blood. For two weeks patient passed tarry stools but vomited no more blood. Physical exam:—Weight 230 pounds. Tenderness over epigastrium, but more tender just to the right of median line. Pain is relieved upon taking food into the stomach. Pain comes on about 4 to 6 hours after meal. Gastric analysis:—

Free HCl—0. Total—40. Free HCl—10. Total—50. Free HCl—20. Total—60. Free HCl—15. Total—80. Fluoroscope—Hypermotility. X-ray—Suspected chronic duodenal ulcer, chr. appendicitis with adhesions. Operation revealed small ulcer in first portion of duodenum.

Case—DAVISSON. Age 51. F. H.—Negative. Past history:—Began having stomach trouble about six years ago. Would have sick stomach and vomiting after meals and pain about an hour after meals. Present history:—Complains of vomiting three to four hours after meals but never vomits food. No blood in vomitus. Has nausea about an hour before vomiting. Sometimes nausea comes on suddenly and vomits. Has lost about 20 pounds in the last year; has sensation in region of the stomach as if it were fastened to his backbone and is all the time drawing in. Gastric analysis:—Free HCl—0. Total acidity0, lacticpositive. Free HCl—0. Total—10. Free HCl—0. Total—10. Fluoroscope:—Constriction at pylorus. Suspected ulcer which has undergone degeneration. X-ray:—Chronic gastric ulcer. Hypochlorydia with hypermotility.

Case—PATTERSON. Age 55. F. H.—Negative. Past history:—Began having stomach trouble about five years ago. Has misery in epigastrium and complains of bloating with gas. Pain would get so severe at times that he would have to have relief. Present history:—Began about three weeks ago with pain in region of stomach which was followed with vomiting. Relieved upon taking soda or after vomiting. Pain does not come on at any special time and is always increased upon taking food. Physical examination:—Chest normal. Abdomen normal, except for some slight tenderness over the epigastrium. Fluoroscope—Hypomotility. X-ray:—Normal gastro-intestinal tract. Gastric analysis:—Free HCl—80. Total—115. Free HCl—80. Total—115. Diagnosis:—Gastritis chronica, hyperchlorydia with hypomotility.

Case—MOORE. Age 63. F. H.—Father died cancer jaw age 78. Mother died age 78, cause pleurisy. Past history:—Scarlet fever, complication otitis media. Typhoid fever age 25. Has had stomach trouble for 20 years. Has bloating after meals and at times has pain which comes on an hour to two hours after meals. Has burning and gnawing sensation in stomach which is often relieved upon taking food. Has periods of vomiting which are relieved upon lavage. Present history:—Patient has been having severe pain in the stomach with vomiting. Pain began about one week ago but has only been severe for 24 hours. Following the severe pain has begun vomiting blood. Is very tender over epigastrium. Vomiting of blood ceased under morphia and cold packs to the abdomen. Gastric analysis:—Free HCl—0. Total—50. Free HCl—10. Total—50. Free HCl—0. Total—40. With the Boas test meal, stomach is empty in 30 minutes. Hypochlorydia with hypermotility. Diagnosis—Chronic gastric ulcer.

Case 19—Male, age 26. F. H.—Negative. Past history:—Hookworm 1915. Malaria 1913. Present history:—Entered hospital July 10, from command, complaining of a gnawing sensation which is accompanied by burning. Symptom is relieved upon taking food. Symptoms return about three hours after eating. Has a feeling of weakness and nausea when stomach is empty. Gastric analysis:—Free HCl—10. Total—50. Free HCl—10. Total—50. Free HCl—0. Total—40. Free HCl—10. Total—50. Free HCl—0. Total—35. Free HCl—0. Total—40. Hypermotility. X-ray—Ulcer lesser curvature. Hypochlorydia with hypermotility.

Case No. 44—Male, age 24. F. H.—Negative. Past history:—Has had stomach trouble for five years. Cannot eat sweets and coarse foods. Does fair on liquids. Present history:—Entered hospital June 6, with pain in upper abdomen, nausea and vomiting. No blood in vomitus nor in stools. Physical exam.:—Poorly developed, abdomen tender over epigastrium, with some general tenderness over entire abdomen. Gastric analysis:—Free HCl—80. Total—100. Free HCl—70. Total—80. Free HCl—75. Total—80. Free HCl—80. Total—100. Fluoroscope—Hypomotility. X-ray—Ulcer chronic lesser curvature. Hyperchlorydia with hypomotility.

Conclusions:

Carmen found in his work on Roentgenologic determination of gastric motility that hypermotility with achylia gastrica or hypochlorydia was diagnostic in chr. duodenal ulcer, and that hypomotility is very common in conjunction with acute ulcer of the stomach, but that in carcinoma of the stomach, where we usually have hypochlorydia, he finds hypermotility.

In our cases of chronic duodenal ulcer we also find hypermotility with hypochlorydia or achylia gastrica.

In acute ulcer of the stomach hypomotility with hyperchlorydia in 60 percent of the cases.

In chronic gastric ulcer we found hypermotility with hypochlorydia in 80 percent of the cases, also in most of the cases of hyperchlorydia we found hypermotility, all of which indicates that the increase or decrease of free HCl in chronic ulcer of the stomach has nothing to do with the gastric motility.

In our cases of gastritis chronica, regardless of cause, we found the following: Hyperchlorydia with hypomotility, and hypochlorydia with hypermotility. We were never sure as to our

cases of so-called gastritis chronica, because even in the absence of the x-ray findings, it is possible that we might have had a small peptic ulcer.

We found that we could not depend upon the symptoms of hunger pain, food relief, hypersecretion and hyperchlorydia, as laid down in our modern text books, as the cardinal symtoms of chronic duodenal ulcer.

We also found that the great majority of cases of burning and gnawing sensations in the stomach were either achylias or hypochlorydia rather than the accepted rule of hyperchlorydia.

DISCUSSION

DR. FRANK H. JETT (Terre Haute): I have tried hard to believe in gastric analysis, but will have to admit that I have not succeeded. Just recently I went through 200 gastric analyses at the Mayo Clinic; spent more than a day on them and tried to draw conclusions, but found I could draw no conclusions whatever from the single gastric analysis.

If gastric analysis is going to gain a place in diagnosis, it must point the way at least sometimes when everything else fails. Just as in the symposium we had on tuberculosis of the kidney. The x-ray pointed the way in the dead tubercular kidney when the cystoscope failed, when in fact everything else failed. The cystoscope pointed the way in cases where the x-ray failed. It is not hard to think that the laboratory points the way in these cases when both cystoscope and x-ray would fail. This is just what gastric analysis does not do.

A controversy about a diagnosis from hyperacidity and increased motility of the stomach has been fought out by Carman and George. Carman claims that by stomach movements and gastric analysis, he can make a diagnosis. George used serial radiography, and at least to me, has proved that Carman is wrong. The plates that have just been shown on the screen, each and every one, could have been a normal stomach, and the diagnosis should not have been made on the plates unless these were part of a series of plates which proved the filling defect to be constant. It is not unusual, especially in a nervous patient, to find a constant filling defect due to spasm. These cases must be checked with repeated serial plates, also by giving belladonna before the plates were taken. The filling defect to be taken as a real lesion must be constantly present in every plate, also the same general contour.

I recently saw a case of duodenal obstruction from gall bladder stones. This case had a very high motility of the stomach and a very high acidity, but as proved by operation, there was was nothing the matter with the stomach or duodenum, simply obstruction from gall-bladder adhesions.

As to acute and chronic gastritis, I am free to confess I do not think they exist except the gastritis of corrosion. Acute and chronic gastritis, so called, is undoubtedly a symptom of appendix, gall-blader, duodenum, pancreas, ulcer and cancer of the stomach.

It was Monyhan who said you should make a diagnosis of duodenal ulcer by telephone. This perhaps is not exactly true, but it does emphasize what Monyhan intended to convey. That is, that there is nothing so important in the diagnosis of high abdominal disease as the right sort of a history. The history must consist of what the patient says of his own accord, this followed by a cross examination in the same manner an attorney gets the truth from a witness on the witness stand. A history taken this way by an acute diagnostician, well interpreted, is perhaps worth more than all the other examinations that can be made of the patient. I do not mean to say that the x-ray and the various other methods of arriving at conclusions should be discarded, but I would warn you to be careful when they disagree with a well taken, carefully interpreted history.

DR. H. O. PANTZER (Indianapolis): I am charmed by the critical attitude of the essayist in presenting his subject. However it would seem to me as yet we dwell too exclusively upon what is apparent in the acute clinical picture. Shall we not seek deeper for what is the fundamental pathology? Just recall how differently in size, position and form the stomach appears in the different pictures shown on the screen. May, or even *shall*, these gross anatomical irregularities not suggest to us disturbances of function which, last in themselves, again invite visitation by bacteriemic and toxemic diseases? My attention early was called to this possibility. In the early nineties I operated upon a man who by various medical men, including myself, was supposed to have cancer of the stomach. The operation revealed a stomach dislocated by bands of peritoneum which at one point constricted the stomach, dislocated and deformed it so as to create manifest interference with its motility and function. No cancer was found. The release of the constricting bands was studiously attempted, and resulted in what seemed complete cure through many years of observation thereafter. Since then I have closely observed the anatomical irregularities pertaining to the stomach, duodenum and the various abdominal organs, and find myself warranted in *most* cases of ulcer of the stomach or duodenum *not* to excise the ulcers, but only to release bands and membranes where such interfere with the free function of the afflicted organs. There is further support given to my views as to the fundamental pathology in such

cases by their history; namely, that in a large percent functional disturbances of these organs can be traced back to *infancy*.

DR. W. H. FOREMAN (Indianapolis): The diagnosis of ulcer of the stomach or duodenum is a very complex thing, as I have many times said. You must take into consideration the whole human organism. For instance, take motility. There are so many things outside of the stomach that can modify the motility of the stomach, and very few things that can modify its motility in the stomach itself. We find some cases with high acidity that have high motility, and some cases with high acidity that have low motility. On the other hand, in cases of achylia we have very marked motility. Again, gall-bladder disturbance, appendicitis, bowel or pelvic trouble, a disturbance of the heart or lungs, can all cause a hypo- or hypermotility, so that acidity has very little to do with gastric motility. If you have a tuberculosis of the kidney you may have a disturbance of motility of the stomach and acidity present, so you cannot make a diagnosis of ulcer, duodenal or gastric, solely upon the basis of findings in the stomach itself. You must go outside of the stomach and consider it from every physical standpoint. I do not believe that duodenal ulcer and gastric ulcer are peptic ulcers at all. That is, they are not digestive ulcers. I do not believe that acidity has much to do with the formation of ulcer, but I do believe that acidity has considerable to do with the healing of that ulcer, and that by neutralizing the acidity you get better healing of the ulcer. Ulcer has been demonstrated to be due to infection primarily.

Also in regard to sensibility. Some persons with ten points free acidity may have pain; others with fifty points may not have pain; and still others with practically no acidity may have pain. There is more than one element producing pain in the stomach. For instance, if you have a frost-bite on your toe, one day it will hurt and the next day it will not. Why not? The chilblain is there, but there is a difference in sensibility. Likewise with ulcer of the stomach or duodenum there is a difference in the sensibility to pain in different individuals and in the same individual at different times, regardless of the percentage of free acid present.

In regard to secretions, there are so many diverse causes influencing stomach secretions that we have to make a large number of examinations to come to any decision worth while. I put less confidence today than a few years ago in the chemical examination of stomach contents, because there are so many conditions that can cause hyper- or hypoacidity of the stomach outside of the stomach itself. You surgeons know that a chronic appendix can cause hyperacidity, and likewise a gall-bladder disturbance or a lung disturbance can cause hyper-acidity, and so all through the list. I do not believe with Monyhan that you can diagnose ulcer over the telephone. It is a complex problem and you must work it out from every possible standpoint inside and outside the stomach.

DR. ALFRED S. JAEGER (Indianapolis): The acidity in duodenal or gastric ulcer is an incident, not a cause. The longer I study gastric surgery for ulcer the more I am inclined to believe that the real cure of gastric or duodenal ulcer is not due to the surgery *per se*. Surgery is an aid in correcting abnormal configurations, and in the past we have fooled ourselves into the belief that resections, or gastro-enterostomy, etc., has cured gastric ulcer, when the fact is that the operation simply relieved the anatomical irregularities and gave Nature a chance to bring into force its recuperative powers; but the surgery alone does not cure; the more I see of these cases the more I am inclined to believe that the ultimate cure of the condition is medical.

PUBLIC POLICY AND LEGISLATION*

A. M. SULLIVAN, M.D.
ATTICA, INDIANA

We have in our County, District and State Medical Associations, and in the American Medical Association, organizations that from year to year have been successful in having laws passed in this and other states that have raised the requirements of physicians to such a plane that the present day graduate physician is well trained. Yet the protection afforded the physician by the laws of our state seems vague and indefinite, with little or no effort of enforcement, and it would further appear that every stipulated fee established by our legislatures for the benefit of the physician has been paltry and insufficient.

It always seemed to me in seeking advice or help from our local county and district societies that we should have within our state organization a high court of appeals that would functionate in helping or advising us in all emergencies. After perusing the committee appointed by our state organization each year it would appear that every phase of our welfare is taken care of. Theoretically, this is so. Practically, it is not. Our failure to secure results in these affairs is due to a lack of proper co-operation between the state committee members and the local societies. The mental attitude of the local society is to refer matters to the state committee with the feeling that the local

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society's responsibility ends at that point. The mental attitude of our state committee is not to interfere with the activities of local societies, and as a result we will have some diplomatic correspondence, the "buck" is passed back and forth, and we have made no progress.

We are inclined to be just a little hostile to those who have dominated the medical politics within our state society for several years. We admit their cleverness and political ability within our society, and we feel that if the efforts of these capable men had been spent for the interest of the society in general and the physicians in particular, there would be little occasion for papers such as I am presenting. Dominating factions are necessary evils, but a faction should stand for something other than the routine necessary to keep the organization functionating.

As to the State Board of Medical Registration and Examination it has been our observation that a graduate physician is held in restraint or his license revoked for failure to comply with some minor requirements of our laws, which is as it should be. In these cases the Board functionates. We have further observed that when it comes to illegal, unauthorized, non-educated, non-graduated, non-licensed practitioners, as chiropractors, faith doctors, some nurses, and other cults and isms, our State Board of Medical Registration and Examination seems helpless. It seems to be the opinion of our State Association that our State Board of Medical Registration and Examination is not charged with enforcing the medical practice act, although the statute specifically charges them with the responsibility of enforcing same.

We have further observed in the State Board of Health laws and rules that the physician's work and fees are entirely according to the ideas of that department. Evidently our State Association was not co-operating with the Health Department when these laws and rules were made, as our interests have not been properly safeguarded. This is especially so in regard to fees, as there is no fee in making returns for births and infectious diseases, while fees for health work and health officers are from 200 to 500 percent below a minimum fee scale. In fact, the fees of health officers and for health work are so inadequate that on many occasions it is difficult to secure a local board, while those serving do so reluctantly, usually rendering the class of service for which they are paid. The writer is of the opinion that our State organization should have a standing committee co-operating with the Health Department so that the interests of the physician may be properly protected.

We country practitioners realize that the present Workmen's Compensation Act was written and legislated by the insurance companies; that almost every interest of the insurance company is guarded specifically while the interests of the physician are vague and indefinite.

As an illustration, the writer recently had occasion to sue an insurance company for services arising out of the Compensation Act. A judgment was rendered in my favor by a single member and later by the entire industrial Board. An appeal was taken on this decision to the Appellate Court who decided: "The Industrial Board is without jurisdiction to decide on fees of physicians where the employer or insurance company had referred the case to a physician." Holding such power abridged the right to contract. They further held that in the case of an injured employee treated by a physician other than the one secured by the insurance company or employer, the fee of the physician would be subject to the approval of the Industrial Board. Another phase of the Workmen's Compensation Act wherein the insurance companies evade the strict compliance of the law is the employment of nurses for first aid work. Very few of these nurses are working under the direction of a licensed physician, rather is the physician subservient to the nurses. Is our State Association helpless in this matter?

As to a health insurance law the country practitioner does not want it, but if we are so unfortunate as to have a law of this kind we hope our State Association will make the best of a poor bargain.

The outlook of the physician in the smaller towns is discouraging as to a livelihood and scientific development. When a student spends from seven to nine years in school, in addition to his high school work, that he may be a better physician or surgeon, he is going to look for the bigger fields, and especially for hospital facilities. We realize that without hospital facilities our opportunity to progress scientifically and financially is limited, and we are requesting that the present county hospital law be amended so that we may have county and township hospitals. This would give us more hospitals in each county, and would help to keep the present day graduate physician in the smaller community.

There has been a rather poorly organized effort by the retail merchants to have a garnishee law passed in our state. Such a law would increase the cash receipts of physicians each year from 5 to 10 percent. Is not such a law worthy of our support?

In summarizing permit me to offer the following recommendations to our State Association:

1. Propaganda by articles in local papers, public speakers, and moving picture work that would better enlighten the public concerning the ability of duly licensed physicians. This

propaganda to be under the supervision of the Committee on Public Policy and Legislation of our State Association.

2. Revision of the medical practice act in the following manner: The State Association to direct the Committee on Public Policy and Legislation to secure a competent attorney who shall draw up a Medical Practice Law that shall be approved by this committee, and endeavor to have the state legislature pass said bill.

3. A law revising the power of the State Board of Medical Registration and Examination, requiring continuous attendance of one member of board during entire year. Also increase fees of board in conformity with fees of successful physicians.

4. Appoint special committee for board of health work. Otherwise assign this work to the Committee on Public Policy and Legislation or the Committee on Industrial and Civic Relations. Recommend to our Legislative Committee that all fees in board of health work be increased at least 300 percent, also State to pay fees for birth returns and returns for infectious diseases.

5. Amend Workmen's Compensation Act that the Industrial Board may have the power to regulate fees of physicians in industrial work. Specifying that fees shall be those prevalent in that particular community. That the Industrial Board shall have jurisdiction in settling all fees of physicians arising out of Compensation Act. That nurses or other regularly employed first aid attendants are to act under the written instructions of a duly licensed physician. That in all accidents, certificate of final discharges or form No. 26 must be filed with the Industrial Board by a duly licensed physician who must have personally examined the case. That the Committee on Industrial and Civic Relations be charged with the responsibility of co-operating with the industrial board.

6. Amend present law for physicians' fees for insanity inquests, increasing fee to $15.00 to $25.00 per diem and $.15 for every mile necessarily traveled. Present law allows $2.00 to $3.00 per diem and about $.05 per mile.

7. Amend present county hospital law that we may have both township and county hospitals. That one or more adjoining townships in one county or adjoining counties may establish a hospital, under similar procedure of a county hospital except that townships involved bear expense of same.

8. Revision of fees for coroners' office, increasing fees to $15.00 to $25.00 per diem and mileage to $.15 per mile. Present per diem is from $2.50 to $10.00 and mileage $.05 per mile.

9. That the Committee on Public Policy and Legislation shall be aggressive toward securing a garnishee law.

10. That our Association combat any legislation limiting physicians in dispensing of drugs.

11. That we recommend the greatest restrictions on our reciprocal relations with other states.

12. That one or more years' hospital service be required of all applicants for license, this in addition to the present requirements.

13. That the course on medical jurisprudence at Indiana University be revised.

14. That our State Association shall lend its efforts in the development of the postgraduate medical course at Indiana University.

To accomplish any or all of these things will require considerable time, money and thorough understanding and co-operation between the State Association and our county societies. Is not our interest or welfare sufficient that we should employ an all-time secretary or field man? We should gradually increase the dues of our State Association each year in order to give us better service.

We should co-operate in our legislative work with the dentists, druggists, veterinarians and chemists, for we have many things in common.

In asking our state legislature for reasonable protection and compensation, we feel the high standard of the practicing physician in Indiana has merited the right of consideration.

DISCUSSION

DR. E. M. SHANKLIN (Hammond): Doctor Sullivan certainly has covered a variety of subjects in his paper. On some of the matters I agree with him, on others I entirely disagree, while on others I am willing to meet him halfway.

He speaks in the beginning paragraphs of his paper about what I call the "Amen corner" of the State Association—the little coterie of individuals who seem to control the policies of the Association. I feel that it is absolutely essential for the success of any organization that someone have at least enough interest in the organization to see that its affairs are conducted in a businesslike way, and while we have a membership of 2700 or 2800 in Indiana there are very few members who are really interested in the Association to the extent that they will give of their time and in a number of instances of their money in order to further the interests of the Association. It is such men who are credited with making up the "Amen corner" of the Association.

The doctor speaks of the State Board of Medical Registration and Examination, and of the Committee on Public Policy and Legislation, in a very properly critical way. The fact is, as I see it, there is always an open season for the State Board and the Committee on Public Policy and Legislation. To my notion the fact that

we have an open season is due to the misunderstanding of the average member of the Association as to the duties of these bodies. I will speak first of the Committee on Public Policy and Legislation, and I will ask you to keep in mind four things in connection with this committee. The first is that the members of this committee are members of this Association and men engaged in the active practice of medicine for a living. The second is that there is no remuneration, no per diem. Third, there is no expense account for the members of this committee, and fourth, the interest of no single member of this committee is any greater than the interest of any other individual member of the Association. I think if you will bear these four things in mind it will clear up a great deal of the criticism of the workings of this committee.

One other thing. I will take you back to the 1917 session of the Indiana Legislature, when it looked as though a bill known as House Bill No. 154 was going to go through the Legislature without any opposition, a bill allowing a certain cult a separate licensing board in the State. I was a member of the Legislative Committee at that time. I was in Indianapolis when the committee was in session and we sent out, by telegram, by special delivery letters, and by telephone an appeal to every County Society in the State asking that a representative be sent to Indianapolis the next day. The situation looked very grave indeed. At the appointed time of the meeting less than one-third of the counties of the State of Indiana had representatives there. In other words, less than one-third of the county medical societies of this State were sufficiently interested to have representatives at this meeting. Fortunately, we were able to sidetrack the bill and everything was lovely, but the fact remains that less than one-third of the profession was with us in this thing.

I will go a little further. I hold up five fingers, and on those five fingers I can name every man in the State of Indiana who in 1917 (outside of this one little session in Indianapolis) did any actual work toward protecting the interests of the men in the profession in Indiana. Just five fingers are required to account for the men who were interested to that extent.

Now the doctor speaks of the Board of Health, and he speaks of a thing I never could quite understand. I do not see why a doctor should be paid for birth returns, death returns, etc. I believe the interest of the medical man in sanitation and public health in general should be great enough to permit him to want to bring the State of Indiana up to the standing of other States in the matter of these returns. Take the matter of birth returns. Up in my town the doctors charge $35 for a confinement case. It seems to me that that is enough to include pay for the moment or two necessary to take down the statistics that are required to be sent in. I do not see why we should ask pay for that. It has been my observation that a great many so-called Board of Health secretaries are paid a great deal more than they are worth anyhow. The reason they are not paid more, in my opinion, is because there is an unholy scramble for the jobs. Every time there is a change of county or city administration in the ninety-two counties there is a scramble for a job that pays from ten dollars a year up. That does not apply every place. I recall one place in Lake County where the doctors got together and said they would not take the job of poor doctor for $100 a year, and the result was that when the time came to make the contract no one wanted it, and instead of paying $100 they had to pay $500, which was pretty fair pay for the work.

I believe the industrial compensation law of the State of Indiana is a long step in the right direction. I do not believe it is a one hundred percent law; there are a lot of things about it I do not like; but I believe as we have experience with the Board, particularly in the matter of enforcing the collection of claims, that most of you will change your opinion. We were talking last March in South Bend, and Doctor Hollis of Hartford City had much to say about some insurance company with whom he was having a quarrel over the matter of a bill. This topic was under consideration at a dinner that night and the doctor was advised to sit tight and he would get his money. He tells me this morning that the bills were all paid.

As to the wording of the Act itself, as I remember, the Act states that the medical or surgical fee in railroad or industrial cases coming under the Compensation Act shall be that which prevails in the community. That is just the recommendation the doctor asked for. Doctor Oliver, at that time President of the State Association, gave to the Board what he considered a fair fee bill covering a wide range of surgical cases, and the Board adopted that bill a few years ago and since that time four of the members of the Board have told me personally that they considered that fee bill was out of date and they were not disposed to require practitioners in Indiana to live up to that bill.

As to the matter of publicity, I think it is a good thing, but I want to say that if the people of Indiana could be educated to the idea that their doctor should be a doctor who attends the sessions of his county and state medical societies, it would be the biggest bit of publicity that this Association could put forth.

In the matter of legislation relative to limiting the dispensing of drugs, there has been no

bill in the Indiana Legislature that has passed the House and Senate that has in any way limited the matter of dispensing. Senator Beardsley had a bill, No. 154, which did limit very seriously the dispensing of drugs, but that bill was killed and to my knowledge there has been no bill introduced since.

DR. W. T. GOTT (Crawfordsville): I am very much gratified, indeed, to be here and hear Dr. Sullivan's paper with which, in the main, I agree. However, I feel in duty bound, on account of my connection with your State Board of Medical Registration and Examination, to say something with reference to one phase of the doctor's paper, dealing with the apparent failure of the Board to function.

The function of the Board is two-fold. The first and most important of which is the establishing of an educational standard for the recognition of Medical Colleges and medical students, and to pass upon the educational qualifications of applicants for a license based upon the said standard. Your Board, I believe, has functioned satisfactorily in this regard. At least we have heard no criticism of this phase of the Board's work.

The doctor in his paper has called your attention to the seeming failure of the Board to enforce the second phase of the Medical Practice Act which it is directed to do, by specific provision of the Act itself. The failure is more apparent than real, as you will realize when I call your attention to the fact that the enforcement of the law in relation to the practice of medicine without first obtaining a license so to do, cannot be successfully carried out without the conjoint action of the County Prosecutor.

The Medical Practice Act passed by the General Assembly for the sole purpose of protecting the sick against the machinations of the incompetent and unscrupulous should have the hearty co-operation of all county prosecutors whose duty it is to aid your Board in the enforcement of said law.

The law provides that the prosecutor shall represent the Board in all cases upon proper complaint of the Board. Right here is one of the weak spots in the law. Your Board is always anxious and willing to furnish the evidence to the prosecutor, when it can be obtained, and file the necessary affidavit against the offender. The prosecutor, however, does not always act, when in possession of such evidence, and unless he can be induced to do so, your Board is helpless. The profession and the voters in the county where the violations of law occur are the most potent forces to secure action in such cases. The prosecutor is frequently an inexperienced lawyer and fails to secure conviction by not presenting in a convincing manner the importance of the enforcement of the law enacted solely for the protection of the public.

DR. HARRY ELLIOTT (Brazil): It seems to me there should be something done to enforce the Medical Practice Act, not to relieve us, but to protect the citizens of the State of Indiana. Personally, I am in favor of all who practice the art of healing having the same fundamental and preliminary training; or of throwing down the bars, and letting any citizen who desires practice medicine without restraint of law.

DR. E. E. EVANS (Gary): I think we ought to make it clear that we are not taking action against the chiropractors or others because we have anything against them, but that we are asking these laws because we are in position to know better than the laity what are good laws for the people. Just as the Bar Association has the power to expel one of its members who does not live up to its rules and regulations, so the medical profession, realizing the injustice that can be done by improperly prepared men practicing medicine, asks that those who practice medicine in Indiana shall be qualified and at least know something of normal and abnormal physical conditions. I think that ought to be made clear.

DR. CHARLES STOLTZ (South Bend): In the Indiana Industrial Law, Sec. 26, exists exactly what the essayist wants passed. Go and read your industrial law. A great many times we demand legislation in regard to something that is already done. All we need is to get behind and enforce that Act.

DR. A. M. SULLIVAN (Attica): The Medical Practice Act was passed in 1897; the law relative to coroners was passed in 1875 and 1883.

In the smaller towns the city attorney usually receives two or three times as much as the entire board of health, and all it requires to be a city attorney is that he shall be a lawyer, which means in Indiana that he must be twenty-one years of age and of good moral character. No education is required. Another feature to be considered is the nurses. We are going to be in competition with the nurses quite a little.

In regard to birth returns, some other states are paying for birth returns and returns for infectious diseases. I think that we ought to come up to the standard of other states.

In regard to the penalty for chiropractors and others that are convicted, I would state that the penalty for a veterinary practicing without a license is greater than for a physician practicing without a license. There is a jail sentence attached to practicing veterinary surgery and medicine without a license.

In regard to this industrial law, I have here the *Northeastern Reporter* 126, p. 494, and it

is well worth while to read that decision. For instance, a doctor here had been doing the work for the Hotel Oliver; someone got hurt and they would call Doctor Terry; there would be a dispute between the insurance company who carried the insurance as to the value of the services rendered. If you could not arrive at a decision with the carrier of this insurance you would have to file that bill with the Circuit Court; the Industrial Board would have no jurisdiction over that. But if the injured person would go to some other town and hire a physician who had not been doing the work for this particular hotel, then that fee would be subject to the decision of the Industrial Board. I think this Appellate Court decision should be printed in THE JOURNAL.

VALUE OF ALIMENTARY TEST IN DIAGNOSIS OF MILD HYPERTHYROIDISM

Ten patients in whom a positive diagnosis of hyperthyroidism could not be made until the basal metabolic rate was known, and three perfectly normal persons were used as controls for the experiment reported on by M. Ford Morris, Atlanta, Ga. (*Journal A. M. A.*, June 4, 1921). The different tests and determinations in both normal and hyperthyroid cases were made under the same conditions, etc. The sugar estimations were made according to the method described by Myers. The basal metabolic rate was determined with the Jones metabolimeter, according to the method described by Jones. The epinephrin test of Goetsch was made in all thirteen cases. The blood sugar estimation before the ingestion of glucose was made after an overnight fast of fourteen or fifteen hours. The results justify concluding that the alimentary hyperglycemia test is of distinct value in the diagnosis of mild hyperthyroidism. In persons whose symptoms and physical findings are suggestive, but insufficient to warrant the making of a positive diagnosis of hyperthyroidism, the obtaining of results similar to those recorded in the ten cases reported may be considered as valuable corroborative evidence of the presence of thyrotoxicosis. The test, however, is not pathognomonic.

EXERCISE TOLERANCE OF CHILDREN WITH HEART DISEASE

The circulatory reactions after test exercises in forty-five normal children, and in 116 children with heart disease, confirmed the results obtained by May G. Wilson, New York (*Journal* A. M. A., June 11, 1921), in the twenty normal children of the previous study, in all essential points. A working table was formulated of standardized test exercises followed by normal systolic blood pressure curves, without symptoms of dyspnea and fatigue. It was standardized from an analysis of the reactions of an average group of sixty-five normal children according to age, weight and height. The degree of distress and type of systolic blood pressure curve following standardized test exercises was used as a gage in estimating the exercise tolerance of children with heart disease. Of the seventy-one children having definite organic heart disease, without symptoms of insufficiency, 69 percent had a normal tolerance for standardized test exercises, 29 percent had a fair tolerance, and 2 percent had a poor tolerance. In children with chronic organic heart disease, exercise tolerance tests give important and useful information which may be utilized as a scientific basis for intelligent regulation of the child's activities. The observations resulting from this investigation would seem to indicate that the fear of exercise is unwarranted, and that a wider lattitude may be permitted with safety.

EFFECT OF PROHIBITION ON INCIDENCE OF PORTAL CIRRHOSIS

A study was made by Joseph L. Miller, Chicago (*Journal A. M. A.*, June 11, 1921), of a number of patients with cirrhosis entering the Cook County Hospital from 1910 to 1920, inclusive. Attention was attracted to the subject by the almost complete disappearance of cirrhosis during the last year in the wards of this institution. The histories of the nineteen patients entering during 1920 were reviewed with the hope of determining whether these patients had been able to secure alcohol after July 1, 1919. All but one gave a history of chronic alcoholism, but no mention was made of whether they had been able to obtain liquor after July 1, 1919. This question must therefore remain undetermined. From these figures there can be little doubt that portal cirrhosis, in this country, at least, is associated largely and possibly entirely with the use of alcohol. The very sudden drop in the incidence of cirrhosis (1917: 156 cases; 1919: 48 cases; 1920: 19 cases) following prohibition suggests that progression of the process in the liver ceases when alcohol is discontinued. With few exceptions the diagnosis of portal cirrhosis when made at the Cook County Hospital indicates very advanced cases with ascites, and cirrhosis in this stage has almost disappeared.

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EDITORIALS

CLIMATE IN THE TREATMENT OF TUBERCULOSIS

In a recently published book on Pulmonary Tuberculosis (Otis) the uses of climate in treatment are discussed in such a comprehensive and intelligent manner as to merit thoughtful consideration on the part of all those who are tuberculosis workers.

The climate of any locality is its average weather condition, and that includes temperature, humidity, wind, sunshine and the amount of moisture through rain or snow. In speaking of climate we mean the aggregate of these weather conditions, extending over a long period, and in estimating the climate of any region we must know the average range of these various climatic elements. Formerly it was considered that climate was an essential factor in the treatment of tuberculosis, and accordingly it was customary to select those localities for tuberculosis patients in which the climatic conditions seemed to be most favorable. However, the open air treatment can be carried out anywhere, even in the crowded city, for more depends upon the method, the careful attention to details, the skilled medical supervision, and the complete fulfillment of the outdoor life than upon any special climate. Nevertheless, favorable climatic conditions are an added advantage, for the purer the air and the more favorable the other climatic conditions, the more perfectly the open air treatment can be effected.

The essential favorable climatic conditions for pulmonary tuberculosis are: first, pure air free from bacterial impurities and dust; second, the maximum amount of sunshine; third, the absence of or protection from high winds; fourth, moderate dryness and more or less equability; fifth, a medium or cool average temperature.

A well known writer on tuberculosis says "the idea of climate for the average pulmonary patient in the earlier and more hopeful stages of the disease is the one where extremes of temperatures are not great, with the purest atmosphere, little humidity, much sunshine and where all conditions permit the patient to live comfortably out of doors the largest number of days out of the year and the largest number of hours out of the twenty-four." Concerning this matter Otis says that favorable climate permits one to pursue the open air life more completely and comfortably, and increases the general invigoration of vital processes. It often favorably influences the mental attitude, as one is more cheerful and hopeful in pleasant weather and under sunny skies, and, lastly, complications such as peritonitis, laryngitis, pleurisy, etc., are less likely to occur in favorable climate.

It must be borne in mind that favorable climate is only a part of the general treatment and that not the most important one. Proper hygiene, diet, discipline, and skilled medical supervision must never be omitted. In deciding upon the change of climate it is of the utmost importance to consider the temperament of the patient, the social conditions, financial standing, and the instances of complicating diseases which might act as contrary indications. Those cases that are most suitable for and most likely to be benefited by a change of climate are: first, early cases; second, advanced cases of the quiescent state, with no serious constitutional disturbances; third, advanced cases with little general disturbance and a moderate degree of resistance; fourth, cases of cavities, if not extensive and in which the disease is quiescent; fifth, cases more or less advanced in which softening and excavation are going on accompanied by much cough and expectoration. Otis believes that the first two classes do well in the elevated regions; the third class of cases are better where there is little or no elevation, such as the pine belt of the South; the fourth may be sent to the lowland regions; the fifth may have life prolonged and live more comfortably in a moderately warm, dry region, such as the southern pine belt or southern California. When complicated with other diseases, the patient must be individually considered.

As Otis well says, not all cases are suitable to send away at all, and this is always the first consideration to be settled when a change is under discussion. Rarely should a patient be sent away who is suffering from acute symptoms, nor should the far advanced, hopeless cases be sent away only to die far away from home. Others of little persistence and self control, and who cannot be depended upon to carry out the plan of treatment, if sent away at all, should be sent to a sanitarium where they can be under a plan of discipline.

Finally, the advantages and limitations of climate in the treatment of tuberculosis are as follows: "A special or truly immune climate does not exist. The value of climate depends upon how perfectly it can aid in the production of improved nutrition, and the restriction of all

functions to a normal physiological standard working into the body and mind to accomplish this. Tuberculosis can be cured in every climate where extremes do not exist. The individual condition of the patient alone allows the choice. To accomplish a cure the plan of treatment and the method of life the patient follows hold the first consideration."

THE ANTI-BEER BILL

In all probability most of the people have an idea that the Volstead Anti-beer Bill, now before Congress, is innocent enough, and we confess that we too have been somewhat deluded, at least to the extent of defending the assertion that the manufacture and sale of beer should not be permitted on the ground that beer has any medicinal value. However, the Volstead Anti-beer Bill, like many other bills that appear so innocent on the surface, contains a "stinger" which should be eliminated before the bill is passed, and we refer to that feature of the bill which prevents or hampers chemical or manufacturing industries from using alcohol. Many industries will be affected if the bill in its present form is passed, and it is hoped that the protest of the American Chemical Society and other interests will have some weight.

THE CROOKEDNESS OF THE ANTI-VIVISECTIONISTS

The anti-vivisectionists, like the anti-vaccinationists, always have resorted to a species of crookedness and sometimes open dishonesty in order to win converts. Facts are distorted, and the most specious arguments put forth in order to make it appear that animal experimentation is cruel, inhuman and unworthy of tolerance under any conditions. A late piece of deceptive literature emanating from the anti-vivisectionists is a garbled quotation from an address given by Dr. William J. Mayo before the Boston Surgical Association. The anti-vivisectionists publicly announce that Dr. Mayo advocates "that dogs be protected from vivisection or from being used for experimental purposes". This statement is based on a garbled quotation from Dr. Mayo's address, in which he said that the dog must be protected from wanton experimenters. What Dr. Mayo did say was as follows: "Animal experimentation has become one of the foundation stones of progress and has resulted in gifts of inestimable value to humanity. The activities of anti-vivisectionists seriously threaten the continuance of these investigations which are of such paramount importance to the nation's health. It is undoubtedly true that opposition to animal experimentation has been brought about by physicians themselves. * * * The medical profession has been derelict in permitting untrained men to do unnecessary animal experimentation without supervision, work which was of little or no value. By pursuing a policy of honesty and faithfulness to a trust, animal experimentation can be carried on without objection. If it is the wish of the medical profession to continue this work it must not furnish a market for the thief, and it must protect the dog from the wanton experimenter."

This statement of Dr. Mayo is the one that has been garbled and distorted for the purpose of making it appear that Dr. Mayo is opposed to vivisection. Could anything be more dishonest or contemptible? But what more could be expected from a lot of fanatics?

EDITORIAL NOTES

THE A. M. A. has appointed a committee to survey the entire subject of vaccination and to prepare suitable material for educating the public on this question. This action has been found necessary in view of the recurring anti-vaccination agitation.

IN view of the multiplication and activities of the various cults and sects, a committee has been appointed by the American Medical Association to study the entire question of sects in medicine and to determine the proper attitude which the American Medical Association should adopt regarding them.

THE next session of the A. M. A. is to be held in St. Louis, one of the hottest places in the summer. Let us hope that an early date is selected, for if the usual June date is selected it is almost a certainty that those who attend the session will swelter and lose all semblance of religion in damning St. Louis.

FOR the most part the Fourth of July all over the country was a safe and sane holiday. Young America seems satisfied to spend the Fourth of July in some other pastime than blowing off fingers and burning out eyes with gun powder. Doctors fail to reap any harvest as a result of this changed policy, but it is a safe bet that no doctor is sorry to lose the patronage that comes from injury due to the unsafe use of gun powder on the Fourth of July.

IT is well established that properly conducted wards or hospitals for the tuberculous constitute no source of contagion even in thickly settled communities, and to assuage the public fears on this question the A. M. A. at the Boston Session recommended that general hospitals in all parts of the United States should provide separate wards or separate rooms for the care of pulmonary tuberculosis patients and that such

patients be never denied admission, at least in emergency, because of the character of the disease from which they are suffering.

THE A. M. A. very justly put itself on record as opposed to the practice of some members of the medical profession in aiding in booze distribution. The matter was acted upon by the presentation of a resolution as follows:

WHEREAS, Reproach has been brought upon the medical profession by some of its members who have misused the law which permits the prescribing of alcohol, therefore, be it

RESOLVED, That the American Medical Association now expresses its disapproval of the acceptance by a small minority of the profession of the position of being purveyors of alcoholic beverages.

IT looks very much as though the medical profession is digging its own grave. What else can we think when we find prominent members of the medical profession advocating Compulsory Health Insurance, Health Centers, and Free Hospitals under State or Federal control where medical and surgical treatment may be secured by anyone without money or without price, also venereal clinics, free or nearly so, and many other proposed medical uplift schemes, all tending to undermine the physician in private practice and eventually drive him out of business. It is about time to separate the sheep from the goats and know where we stand on this proposition of making the practice of medicine another one of those state functions which fail to functionate in the sense of giving something that is worth while.

THE Muncie Academy of Medicine (Muncie, Indiana) has been putting on a program at the weekly meetings which is deserving of high commendation. The meetings are held on Friday evening of each week, preceded by dinner at a local hotel. During the past couple of months such men as Dr. Joseph Rilus Eastman, Indianapolis; Dr. P. E. McCown, Indianapolis; Dr. Joseph E. Beck, of Chicago; Dr. Joseph Colt Bloodgood, of Baltimore; and Dr. George W. Crile, of Cleveland, have been the guests of the society and delivered addresses on interesting subjects.

The plans of the Academy for the future include some special meetings on hospital standardization, public health problems and the discussion of subjects of interest to lay minds, to which the public is to be invited. The members believe this plan to be the most effectual in fighting the various pseudo medical cults.

WE dislike to think it, and yet developments at the Boston session of the A. M. A. indicate that we shall be obliged to fight public health officers, as a class, in connection with the attempt to force Compulsory Health Insurance and State Medicine upon us. Some of the health officers in attendance at the Boston session admitted that they were for State Medicine, and that it was perfectly natural for health officers to support it as it meant a continuance of the official positions and salaries connected therewith. In view of the fact that in a large measure health officers owe their positions to the influence of the medical profession, it seems to us that they should be in better business than trying to foist State Medicine upon us. It is time for a "show down" on this question of State Medicine, and the sooner we find out who our friends are the better it will be for us and the more intelligently we can act.

THE Associated Anesthetists are asking for contributions for the purchase of a bronze bust of Dr. William T. G. Morton to be placed in the niche assigned him by the electors in the Hall of Fame. The election of Dr. Morton to the Hall of Fame has brought a signal honor to the allied professions of medicine and dentistry. The Associated Anesthetists, in session in Boston during A. M. A. week, voted unanimously for the privilege of placing this bust, and plan to have it ready for placement on Oct. 16 in celebration of the Diamond Jubilee Anniversary of Morton's first public demonstration of ether anesthesia. The Associated Anesthetists as well as other prominent leaders of the allied professions are urging all those interested to make substantial contributions for this purpose. Check should be sent to F. H. McMechan, M.D., Secretary-treasurer, Associated Anesthetists, Lake Shore Road, Avon Lake, Ohio.

DR. FRANK B. WYNN, of Indianapolis, has been chosen vice-president of the American Medical Association. This is a very deserving honor to one of the best known medical men in the United States and one who has done much for the American Medical Association. It was Dr. Wynn who established the scientific demonstration and exhibits before the A. M. A. after he had made such an unqualified success of a similar enterprise in our own Indiana State Medical Association. Now that the A. M. A. has but one vice-president, an honor such as has been bestowed upon Dr. Wynn carries with it more distinction than was accorded the first vice-president several years ago when it was the rule to have a long list of vice-presidents. The only regret that we Indianians have is that Dr. Wynn was not made president, an honor

which we hope will fall to him a little later, as there is no one in the Association who is more deserving.

AT the Boston session of the A. M. A. Dr. J. F. Roony of New York presented before the House of Delegates the following resolution: "Resolved, That the American Medical Association defines 'State Medicine' to be any method providing for the practice of medicine under the direction, subsidy or control of the state or national government, excepting those functions having to do with preventive medicine and public health which do not involve the treatment of disease except that which is communicable." This resolution was referred to the Reference Committee on Legislation and Public Relations and, as might be expected, was given scant consideration as a direct result of the influence of the public health officials. To quote a well known slogan "There's a Reason." The rejection of this resolution was not because it did not hit the nail on the head and define state medicine as it should be defined. However, the time is coming when the medical profession as a whole will be obliged to throw out its false leaders.

DR. JAMES H. STYGALL, medical director of the Indiana Tuberculosis Association, assumed his duties on April 13 and on April 15 began holding clinics. In the fifteen days following, clinics were held in Rush, Noble, Dekalb, Boone and Miami counties. At these six clinics 95 patients were examined, 24 of whom were found to have active tuberculosis, 10 were inactive cases, 14 had tuberculous adenitis, and 14 were declared suspicious. The physicians in these counties have shown a keen interest in the developments of the clinics, and a total of 57 medical men were in attendance, giving an average of ten physicians to a clinic. The success of these clinics is very gratifying to the Association and we believe that in finding the early cases the state and local associations are getting down to the crux of the tuberculosis problem. In locating cases that have never been discovered before, and in seeing that these patients are given treatment at the proper time in the proper way and in the proper place, the spread of tuberculosis is being counteracted and the whole problem is being approached in a manner that will count for much in the control of tuberculosis.

DR. ERIC CRULL, Fort Wayne, President of the Indiana Tuberculosis Association and superintendent of the Irene Byron Tuberculosis Sanitarium, read a paper before the annual session of the Indiana Tuberculosis Association on "Finding the Early Cases". The conclusions drawn in the paper are that to successfully wage the fight on tuberculosis we must have: first, the full and intelligent cooperation and support of the public; second, to get that cooperation and support we must impress upon the public the importance of this work and convince it that tuberculosis can be rooted out of the community, and that elimination would, aside from humanitarian reasons, be the greatest economic feat that can be accomplished; third, to impress thoroughly upon the community the great prevalence of the disease, public clinics held throughout the state would be very potent factors; fourth, to impress on all tuberculosis workers that the prevention of tuberculosis is more of a general health problem than a narrow fight against this one infection; fifth, to convince the public of the great possibilities of this work, numbers of cases must be restored to their families, and to their employers, and be able to resume their civic duties and help bear the burdens of the community, and, sixth, to be able to so restore them, *we must find our cases early*.

IN London they are discussing the danger of athletics for girls. Opinion seems to be divided. One noted school authority says that in spite of the fact that some women develop into physical experts, few of them do not at some time have a more or less serious breakdown. The health of the athletic woman is often more apparent than real. It is further argued that girls who engage in strenuous games often acquire hard muscles, flat chests, and often have a hard, aggressive manner. They frequently suffer from nervous heart trouble, some from rheumatism or displacement of some kind, and sometimes menstruation stops for long periods. They do not seem able to meet unaccustomed strains. Their marriages are often childless. Their children are physically inferior to those of women who have not engaged so much in athletics. On the other hand, some of the well known educators, backed by medical officers and physical directors, disagree with these views. They contend that where occasionally physical exercise or athletics for women is overdone, like everything else, yet in the main nothing but good comes from it, and that there is no reason for opposition to gymnastic exercises and outdoor athletics for girls if properly conducted, and they always are conducted in a well regulated girls' school or in colleges where girls are admitted.

SPEAKING of regulating everybody and everything, which seems to be the popular movement today, we hear nothing about regulating the practice of the legal profession. Of course it is all right to put the doctor out of business,

and make the practice of medicine a state function, as also to fix the amount of his compensation, but you never hear anything about regulating the practice of lawyers or fixing their fees. The attorney in the Stillman divorce case can be awarded a hundred thousand dollar fee, and, as long as the client can pay it, no objection is raised; but if some doctor charged a quarter of that amount for saving the life of one of the Stillmans, the courts and no doubt the public would put up a howl that would be heard from one end of the earth to the other. It is quite true that much of this objection to fees for medical services arises through criticism on the part of doctors who, through a spirit of jealousy or competitive antagonism, are ever ready to place a low pecuniary estimate upon the services of anyone but themselves. In other words, doctors signally fail to stick together and uphold one another, but you never hear of any clash among lawyers, especially when it concerns a question of remuneration. It would be well for us to copy the example of the trades and professions, at least having a semblance of support of those practices and those measures known to be of vital interest to the medical profession.

THE Labor Convention at Denver tried to place the stamp of approval on State Medicine, or, in other words, the rendering by the state of gratuitous medical and surgical services to the laboring man. It failed, as also the movement to secure Compulsory Health Insurance, Old Age Insurance and Non-employment Insurance. Likewise an effort to approve six hours as a legal working day but with eight hours of pay also failed. These movements but show the trend of opinion among laboring men, and indicates a widespread belief in the theory that the laboring man should receive something for nothing. Some of us would have more sympathy for the laboring men if they would carry into effect the practice of delivering eight hours' honest work for eight hours of pay. Today we are suffering not so much from the effects of high wages or, for that matter, what most people term war time or profiteering wages, as we are from the tendency on the part of the average working man to shirk or do as little as he can in order to hold his job and draw his pay. The whole attitude of Unionism seems to be to cut down individual effort and individual output while at the same time demanding an increasing compensation. Such an attitude must change and whenever the unions start out with the idea of delivering labor and cease to stifle individual effort and incentive, the question of compensation will be one that will be easily settled.

As a matter of fact it is about time that regulating everything pertaining to the conduct of the American people should take a rest. We have had enough regulating to last us for the next hundred years, and some of the vicious legislation and its by-products, due to the efforts of the uplifters and faddists, either will have to be wiped off the statute books or ignored if we are to have any peace in our daily lives. The trouble of it is a lot of legislation which looks innocent enough when it is proposed, either is found to contain a "stinger", or is but an entering wedge for something that is positively vicious. As an instance of this we have but to cite the Sheperd-Towner bill which, thanks to the efforts of the rational-minded in the medical profession, seems doomed to defeat, and the various compulsory health insurance bills. Lastly, we have the bills which will serve as amendments to the Volstead Act, or perhaps we might say, adding stringent regulations to the Act, under the terms of which alcohol in any form would not be used in the arts and sciences. There is an old saying that if you give a calf enough rope he will hang himself, and it is hoped that a lot of these wild-eyed reformers who are trying to regulate everything under the sun, will hang themselves through their over-activities. There will come a time when the American people will rebel against the idiotic and inconsistent restrictions proposed by the fanatical reformer.

As an example of the idiotic inconsistency of some of our governmental regulations we can point with pride (?) to the ruling of the Internal Revenue Department to the effect that narcotic inventories, under the Harrison Anti-narcotic Law, covering the period from January 1 to June 30, inclusive, must be in the Internal Revenue office on July 1 or a penalty will be assessed. A doctor residing in South Bend or Evansville will have a sweet time getting his opium inventory into the Internal Revenue office at Indianapolis on July first if he carries the report up to and including the thirtieth of June. Even admitting prompt mail service, and "there ain't no such animal" any more, a report mailed in Evansville, South Bend or Fort Wayne at midnight of June 30 would not reach Indianapolis on July 1. Last year the editor of THE JOURNAL reported on a few hypodermic morphine tablets and the usual amount of cocaine used in local anesthetic work, but in reporting up to and including June 30 his report reached Indianapolis about July 2 or 3, and he was penalized very promptly for failure to get the report in on July 1. No explanation was offered to the inquiry as to how a report covering the period up to and

including June 30 could be gotten to the Indianapolis office within the few hours allowed. We hear that there are others who have had a similar experience. We are not bolshevists, but we would like to see a little common sense pounded into the heads of those who are elected or appointed to serve the American people.

DEATHS

JOHN H. SENEFF, M.D., died May 23 at his home in French Lick, aged 66 years.

SAMUEL B. RUBY, M.D., died on May 16 at his home in Union City, aged 66 years.

SHELBY WRIGHT, M.D., North Manchester, died May 21, at the age of sixty-three years. Dr. Wright graduated from the Louisville Medical College, Louisville, Kentucky, in 1882.

JOHN S. INKS, M.D., of Nappanee, died June 9 at the home of his daughter in Wakarusa. Dr. Inks was born in 1848, graduated in medicine from the University of Illinois College of Medicine, Chicago, in 1884 and had practiced in Elkhart county for thirty-eight years. He was the father of Dr. Charles A. Inks, also of Nappanee. Dr. Inks was a member of the Elkhart County Medical Society and the Indiana State Medical Association.

ELIJAH V. GREEN, M.D., Martinsville, died suddenly on June 9 from acute indigestion. Dr. Green was born in Shelbyville, Indiana, in 1849, graduated from the Indiana Medical College in 1876, and had practiced in Martinsville almost continuously since that date, at the time of his death being manager of the Barnard Sanatorium in that city. Dr. Green was a member of the Morgan County Medical Society and the Indiana State Medical Association.

GEORGE W. MILLER, M.D., died May 12 at the Wesley Hospital, Chicago, as a result of a malignant growth. Dr. Miller was born in Middleburg, New York, in 1877, received his preparatory education at Poultney Academy and graduated in medicine from Miami Medical College, Cincinnati, in 1901. He had practiced medicine in East Chicago for the past twelve years. He was a member of the Lake County Medical Society and the Indiana State Medical Association.

NELSON C. HARROD, M.D., of Tampico, was instantly killed on May 30 when the automobile which he was driving was struck by a Pennsylvania passenger train. Dr. Harrod was born in 1880, graduated in medicine from Kentucky University, Medical Department, in 1904 and had practiced medicine in Tampico since the time of his graduation. He was a member of the Indiana State Medical Association. Mrs. Harrod and one daughter died a few days later as a result of the same accident.

JOHN L. DURHAM, M.D., Graysville, died June 14, aged seventy-six years. Dr. Durham was born in Kentucky in 1884. He was reared in Montgomery County, Indiana, and received his early education in the county schools and at the Waveland Academy. He graduated in medicine from the University of Louisville, Medical Department, Louisville, Kentucky, in 1880. He had practiced medicine in Graysville since 1881. Dr. Durham was a member of the Sullivan County Medical Society and the Indiana State Medical Association.

JOHN W. HOUSE, M.D., Indianapolis, died June 21 in the Methodist Hospital following an operation. Dr. House was born in Lawrenceburg, Indiana, in 1860. He graduated from Valparaiso University and studied medicine at Miami Medical College, Cincinnati, from which he graduated in 1886. He began the practice of medicine at Manchester, Indiana, later going to Lawrenceburg, and locating in Indianapolis in 1904. He was an active member of the Indianapolis Medical Society, the Indiana State Medical Association and the American Medical Association.

GEORGE F. BUTLER, M.D., a former resident of Attica, Indiana, where he was medical adviser at Mudlavia, died June 22 enroute to Chicago from Boston where he had been attending the annual session of the American Medical Association. Dr. Butler was born in 1857 and received his medical degree from Rush Medical College in 1889. Since leaving Mudlavia in 1918 he had served as medical director of the North Shore Hospital in Winnetka, Illinois. He was a member of the Indiana State Medical Association and the American Medical Association.

CHARLES W. MCINTYRE, SR., M.D., died June 6 at his home in New Albany, aged eighty-one years. Dr. McIntyre was born in Ireland, came to America in his boyhood and was reared in Canada. He was a graduate of MacGill University in Canada and graduated in medicine from the University of Louisville, Louisville, Kentucky, in 1883. He had practiced medicine in New Albany for forty-one years and during that time served for many years as secretary of the County Board of Health and later County Health Commissioner. He was a member of the Floyd County Medical Society and the Indiana State Medical Association.

WILLIAM FLOYD JULIEN, M.D., Gary, died in the Mercy Hospital, June 11, from pneumonia. Dr. Julien was born in 1875 at Delphi, Indiana, where he attended the public schools. He later graduated from Purdue University and, in medicine, from Rush Medical College in 1900. The practice of medicine was begun in the state of Illinois. He later removed to Colorado because of ill health, then located in Gary approximately ten years ago where he was engaged in the practice of ophthalmology and otolaryngology. He was a member of the Lake County Medical Society, the Indiana State Medical Association and the American Medical Association.

FREDERICK A. TUCKER, M.D., of Noblesville, died June 6, from heart trouble following an appendectomy. Dr. Tucker was born in Hamilton County in 1873. His early education was received at the county schools, and he graduated from the Rush Medical College in 1897, locating at Noblesville immediately thereafter, where he has continued to reside and practice to the time of his death. Dr. Tucker was the third physisian in Indiana to obtain a commission in the Medical Corps after the United States entered the World War. He was commissioned in June, 1917, and rose rapidly from the rank of first lieutenant to lieutenant colonel. He was first stationed at Fort Benjamin Harrison, later at Camp Oglethorpe and later in charge of a hospital at Macon, Georgia. In the spring of 1918 he sailed for France where he had charge of a base hospital near Toul until the armistice was signed. Dr. Tucker was an active and influential member of the Hamilton County Medical Society and the Indiana State Medical Association.

NEWS NOTES AND PERSONALS

DR. T. E. BRUCE has removed from East Chicago to Clinton for the practice of medicine.

THE annual picnic of the DeKalb County Medical Society was held at Hamilton Lake on June 16.

DR. S. D. HATFIELD, late of Jaeger, West Virginia, has located at Kokomo for the special practice of pediatrics.

DR. WILLIAM H. BUTLER, of Columbus, has retired from active practice after forty-eight years of continuous service.

GRADUATING exercises of the Mercy Hospital Training School at Gary were held on June 6. Eleven nurses received diplomas.

THE members of the Noble County Medical Society were the guests of Dr. J. E. Luckey at his Wolf Lake home on June 21.

DR. FRANCIS M. WILLIAMS, of Anderson, expects to sail from San Francisco about August 1, for medical missionary work in China and Japan.

DR. ROBERT V. HOFFMAN, of Hagerstown, has removed to South Bend where he will fill the chair of internal medicine with the South Bend Clinic.

DR. MYRON HARDING, recently graduated from the Indiana University School of Medicine, has opened offices in West Newton for the practice of medicine.

SIXTY-ONE nurses received diplomas at the graduating exercises of the Methodist Episcopal Hospital Training School for Nurses of Indianapolis, on June 8.

DR. J. ROY BURLINGTON, of Attica, has been appointed local surgeon for the Wabash and C. & E. I. Railroads. He succeeds Dr. A. M. Sullivan, recently resigned.

DR. A. M. SULLIVAN, of Attica, is taking a six months' postgraduate course in surgery, gynecology and urology in the New York Postgraduate School and Hospital.

A RECENT report by the Marion County Tuberculosis Association shows seventy-two public health meetings held under the auspices of the organization with an attendance of 12,777 persons.

DR. JOHN H. GILPIN, of Fort Wayne, has been appointed physician for ex-service men in his district, assuming his duties on June 1. Dr. Gilpin succeeds Dr. M. B. Catlett, who resigned recently.

THE practice and complete office equipment of the late Dr. W. F. Julien of Gary has been purchased by Dr. Harry C. Parker of Chicago. Dr. Parker is a graduate of the medical school of the Northwestern University.

S. P. HOFFMAN, M.D., associate medical director for the Lincoln National Life Insurance Company of Fort Wayne, left on June 1 for the East where he expects to take postgraduate courses in New York and Boston.

ERIC A. CRULL, M.D., superintendent of the Irene Byron Hospital, Fort Wayne, recently attended the meeting of the National Tuberculosis Association in New York and also a meeting of the American Sanitarium Association.

THE members of the Adams County Medical Society entertained the physicians of Bluffton, Indiana, and Van Wert, Ohio, on June 15. A banquet preceded the scientific program. Dr. Mann, of the Mayo Institute, Rochester, Minnesota, presented the leading paper of the evening.

THE annual banquet of the Cass County Medical Society was held June 3 at Logansport. Three pioneer physicians of the county, Drs. Nelson W. Cady, physician at the Longcliffe Hospital; C. L. Thomas, of Logansport, and L. L. Quick, of New Waverly, were honor guests.

ACCORDING to recent announcement, the United States Pharmacopœia is being translated into the Chinese language. As a result of this work, and the adoption of standard formulas for drugs and medicines, it is probable that American drug manufacturers will benefit greatly.

AT the recent annual convention of the National Tuberculosis Association Dr. James Alexander Miller of New York was elected president, President Harding was elected honorary vice-president, Dr. George M. Kober of Washington, secretary, and Henry B. Platt of New York, treasurer.

THE plans and specifications for the new Wayne County Tuberculosis Hospital have been approved by Thomas B. Kidner, expert on hospital construction for the National Tuberculosis Association, and work on the institution has been started. The hospital is to be located six miles south of Richmond.

ACCORDING to announcement, the Saint Elizabeth Hospital at Lafayette is to be enlarged by the addition of a new north wing with a capacity of one hundred beds, the erection of a nurses' home, a nurses' training school building and a stable and garage. The improvements will cost approximately four hundred thousand dollars.

OUT of 211 applicants who took the recent examination for registered nurses' license held by the Indiana State Board of Registration and Examination of Nurses, 208 received passing grades. The highest record was made by Hazel R. Bosler of the Fletcher's Sanatorium of Indianapolis, who made an average grade of 94.6 percent.

DR. ARTHUR E. GUEDEL of Indianapolis was elected president of the Interstate Association of Anesthetists at its recent meeting in Niagara Falls, New York. Dr. Guedel has been in Minneapolis for the past few months doing research work in anesthesia and conducting a postgraduate school in connection with the Minneapolis General Hospital. He returned to Indianapolis July 1st to resume practice.

THE Randolph County Medical Society entertained the Starke County Medical Society together with visitors from Muncie, Hartford City and Indianapolis, on June 13. One hundred twenty-five doctors and their wives were present. Dr. George S. Bond of Indianapolis presented a paper on "The Heart and Its Diseases"; and Dr. J. M. McDowell of Cleveland spoke on "The Activities of the Red Cross in Peace Times."

THE Vanderbilt Medical School at Nashville, Tennessee, is the recipient of a donation of three million dollars, half from the General Education Board and half from the Carnegie Corporation of New York, the sum to be available upon the removal of the school of medicine from its present site to a location on the west campus and upon the completion of a proper building program. They aim to have the new plant ready for operation by the fall of 1924.

ACCORDING to the Associated Press the University of Georgia has taken action officially recognizing Dr. William Long as the discoverer of anesthesia. Although Dr. William Thomas Green Morton of Massachusetts has been elected to the Hall of Fame in New York as the discoverer of anesthesia, the Georgia University declare that they have evidence that Dr. Long first used ether for a surgical operation on March 30, 1842, which they claim is four years prior to the use of ether by anyone else.

THE annual meeting of the Fourth District Medical Society was held at Seymour, May 25, under the direction of Dr. D. W. Weaver, Greensburg, president. The scientific program was as follows:

"Septicemia and Resulting Diseases," by Dr. W. H. Stemm of North Vernon; "Thyrotoxicosis", Dr. C. E. Gillespie of Seymour; "Management of Labor," Dr. C. A. Gibson, Batesville; "Surgical Disturbances of Digestion," Dr. W. D. Haines, of Cincinnati, and "Diagnosis", by Dr. L. L. Solomon, Louisville, Ky.

DURING June the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial

Remedies: The Abbott Laboratories: Saligenin. Armour & Co.: Suprerenalin Base, Suprarenalin Ointment. E. Bilhuber, Santyl Capsules. The Calco Chemical Co.: Amidopyrine-Calco. Hynson, Westcott & Dunning: Tablets Mercurochrome 220—Soluble. H. A. Metz Laboratories: Orthoform. Winthrop Chemical Co.: Mesotan. Nonproprietary Articles: Amidopyrine.

DEDICATION services of the new buildings of the Peking University Medical College, erected by the China Medical Board of the Rockefeller Foundation, will be held the week of September 15-22 and will include an international medical conference to which scientists from America and European countries, as well as the Far East, have been invited. Dr. Henry S. Houghton will be inaugurated as director of the college during this week. The college, which is situated in the capital of the Chinese Republic, had its beginning in an earlier institution—the University Medical College—founded in 1906 by the joint efforts of six British and American missionary societies. In 1916 the property of this school was transferred to the China Medical Board of the Rockefeller Foundation which has purchased additional land and erected, in an interesting adaptation of classic Chinese architecture, a series of hospital and laboratory buildings. The institution comprises not only the medical school but also a two hundred and fifty bed hospital, outpatient clinics, a training school for nurses and a pre-medical school.

THE following Indiana doctors registered at the Boston session of the American Medical Association: Charles G. Beall, Fort Wayne; Charles R. Bird, Greensburg; Claude S. Black, Warren; H. W. Bowers, Akron; Albert E. Bulson, Jr., Fort Wayne; Eugene L. Bulson, Fort Wayne; John W. Carmack, Indianapolis; Ralph S. Chappell, Indianapolis; Fred R. Clapp, South Bend; Prosser E. Clark, Clarksburg; Stanley A. Clark, South Bend; Eldo H. Clauser, Muncie; Charles N. Combs, Terre Haute; Earl Conover, Evansville; Geo V. Cring, Portland; Frank S. Crockett, Lafayette; Edgar C. Denny, Milton; John E. Doerr, Mt. Vernon; D. E. Douglas, Greensburg; James A. Duggan, South Bend; Joseph R. Eastman, Indianapolis; J. H. Eberwein, Indianapolis; G. G. Eckhart, Marion; Bernhard Erdman, Indianapolis; L. H. Eshleman, Marion; William O. Gossett, Brookston; A. B. Graham, Indianapolis; Chas. C. Grandy, Fort Wayne; Wallace S. Grayston, Huntington; Murray N. Hadley, Indianapolis; Leopold Hermann, Evansville; W. H. Hillman, South Bend; Thomas C. Hood, Indianapolis; C. Norman Howard, Warsaw; M. F. Hunn, Shipshewana; Marie B. Kast, Indianapolis; Delbert Kearby, Indianapolis; Walter F. Kelly, Indianapolis; W. H. Kennedy, Indianapolis; E. H. Kruse, Fort Wayne; C. E. Laughlin, Evansville; E. O. Lindenmuth, Indianapolis; Carl H. McCaskey, Indianapolis; Geo. W. McCaskey, Fort Wayne; P. E. McGowan, Indianapolis; H. L. Magennis, Indianapolis; F. A. Malmstone, Griffith; Judson D. Moschelle, Indianapolis; Herman G. Morgan, Indianapolis; Arvine E. Mozingo, Indianapolis; C. F. Neu, Indianapolis; Miles F. Porter, Fort Wayne; Miles F. Porter, Jr., Fort Wayne; M. Ravdin, Evansville; J. W. Ricketts, Indianapolis; O. H. Ries, Knightstown; David Ross, Indianapolis; Louis F. Ross, Richmond; Leslie Sammons, Shelbyville; I. M. Sanders, Greensburg; Charles E. Savery, South Bend; Walter N. Sharp, Indianapolis; J. E. Showalter, Waterloo; James M. Smith, Indianapolis; Orville E. Spurgeon, Muncie; Walter A. Stauffer, Elkhart; Budd Van Sweringen, Fort Wayne; G. W. Thompson, Winamac; F. M. Webb, Jeffersonville; F. E. Wiedmann, Terre Haute; E. N. Wood, Columbus; Homer Woolery, Bloomington; C. C. Du Bois, Warsaw; C. C. Collins, Roachdale; Harvey S. Cook, Valparaiso; Frank W. Cregor, Indianapolis; Chas. H. Emery, Bedford; Edw. D. Freeman, Osgood; H. G. Homer, Indianapolis; Grace Line Homman, La Porte; J. N. Hurty, Indianapolis; George F. Keiper, Lafayette; G. W. Kohlstaedt, Indianapolis; Maurice H. Krebs, Huntington; Geo. D. Marshall, Kokomo; J. H. Wm. Meyer, La Porte; H. O. Shafer, Rochester; Harry Williamson, Marion; Hugh J. White, Hammond; H. R. Allen, Indianapolis; E. M. Amos, Indianapolis; E. R. Borley, South Bend; William T. Clevenger, Indianapolis; Chas. E. Gillespie, Seymour; Jas. A. Craig, Greenwood; Albert T. Davis, Marion; Harry Elliott, Brazil; F. W. Foxworthy, Indianapolis; C. J. McIntyre, Indianapolis; Urbana Spink, Indianapolis; Frank B. Wynn, Indianapolis; Charles P. Emerson, Indianapolis; Arthur L. Mikesell, Fort Wayne; Lafayette Page, Indianapolis.

Within the last year the danger to railway travelers of infection from typhoid fever, dysentery and other water-borne diseases has been reduced to a minimum in most parts of the country through the cooperation of the U. S. Public Health Service with the different state boards of health. Nearly all supplies used on trains for drinking or cooking have been tested by Service engineers and found to be safe, and will be reinspected periodically.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	87
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	24
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	27
15.	Washington	Irvin Huckleberry	5	13
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19
18.	Allen	Miles F. Porter, Jr.	95	105
19.	Greene	W. R. Cravens	16	18
20.	Henry	C. E. Canaday	25	29
21.	Switzerland	R. M. Copeland	7	8

MUNCIE ACADEMY OF MEDICINE

June 17, 1921

On Friday, June 17, 1921, the Muncie Academy of Medicine met for their weekly dinner meeting at the Hotel Roberts.

The speaker of the evening was Dr. Joseph E. Beck of Chicago, who gave a most interesting and instructive talk, his subject being "A Diagnosis of Ear, Nose, and Throat Complications Before Their Arrival." He stated that his subject could very well be called "Anticipation Diagnosis." He laid much emphasis on the fact that it was imperative for the doctor to recall all possibilities of complication and then to observe the patient often and examine him carefully to make sure that there are no complications arising. He spoke of sinusitis, mastoiditis, lateral sinus thrombosis, brain abscess, and in fact all the complicatfons. He stated that there had been so much advancement made in the treatment of ear, nose and throat conditions in the past fifteen years that the treatment then practiced is in the main now obsolete. He pointed out the fact that oftentimes the treatment instituted is too harsh, this being especially so in sinus conditions. The treatment doing more harm than the condition present is explained by the fact that too harsh solutions are used or that the treatment is too energetic. It is absolutely necessary to remember that oftentimes a bony structure is involved and in that case the treatment as necessarily applied to the simple sinusitis is not indicated, but more energetic measures should be tried.

Dr. McCaskey of Indianapolis was the first discussant. Other doctors who brought forth a lively discussion were Drs. Hollis of Hartford City, Krebs of Huntington, Tomlin and Cammack of Indianapolis, Boyd-Snee of South Bend, Wright, Whitaker and Carey of Indianapolis, and Mix of Muncie.

Dr. Beck was elected as an honorary member of the Muncie Academy of Medicine.

Adjournment. Attendance 138.

June 24, 1921

The Muncie Academy of Medicine met for their weekly dinner meeting at the Hotel Roberts on Friday, June 24, 1921, at 6:30.

Dr. Joseph Colt Bloodgood of Baltimore, who earlier in the day had addressed the different civic organizations of the city, was the guest of the Academy and the speaker of the evening. His subject was "The Cure of Cancer Lies in the Education of the Public." He said that it was not the fear of surgery that kept cancer victims from consulting physicians, but ignorance as to the significance of the early symptoms of their present condition. Every woman over twenty-five years of age with a lump in the breast should consult her physician at once and find out its significance. Sometimes what she regards as a lump will prove to be not a lump. If it is a lump, an immediate operation should be advised. If all lumps were removed early, ninety percent or more could be assured of ultimate cure. Every woman who has borne children runs a greater risk of cancer of the uterus than a woman who has not borne children. If she should notice anything unusual in the menstrual discharge as compared with previous periods or has a discharge between periods or after the menopause she should consult a competent gynecologist. "Every adult should know that any sensation observed in the region of the abdomen below the diaphragm which might be called "indigestion", pain, belching of gas, discomfort after eating anything, any change in the time and character of the stools, blood in the stools, nausea or vomiting should mean the immediate consultation of a physician for the purpose of a thorough examination before treatment is instituted. Such symptoms are by no means always signs of cancer of the stomach or intestines, but we know that delay is dangerous." All warts, ulcers and unhealed wounds are abnormalities which, if left alone, may change into cancer. Oral sepsis and the care of the teeth are very important to smokers, since they are more prone to develop cancer of the tongue, lips, oral cavity and mucous membrane of the mouth. X-ray examinations should be made of bones or joints when there is pain, tenderness, swelling, limp, or loss of function of an arm or leg which suggests some trouble in the bone or joint as this is the best way to recognize bone tumors. The clinical history plus a thorough physical examination and laboratory tests should make a diagnosis possible in practically all cases of cancer in any part of the body. It is up to the doctors and nurses to educate the people concerning the cancer incidence and the results of cancer in their own locality. In 1913 there were 75,000 deaths in the United States due to cancer. Due to the distribution of knowledge of cancer the number of deaths per year is decreasing.

In considering the cancer problem it is best to fear the beginning and not the end of cancer. Pain is a late symptom in external cancer, so that if an individual waits for pain, he may wait too long. The first warnings of cancer do not differ from the warnings of diseases that are not cancer, therefore the people must be educated as to what are the danger signals. Cancer never begins in a healthy spot. In external cancer the warning is always something first to be seen with the eye, or felt with the fingers. These first signs are warts, moles, little areas covered with a scab, or an unhealed wound, or there may be a little lump or nodule beneath the skin, or deeper. Pain is rarely present. It may be truthfully stated that external cancer is a disease which develops under ignorance, skepticism or procrastination, because of entirely needless fear of an operation.

Cancer of the uterus can be placed among preventable diseases. If patients would present themselves for examination on noticing a discharge of a different character and at a different time and for a longer period than normal, at this time they would not have progressed so far but that something could be done for them. The easier the diagnosis of a cancer the worse the prognosis, because at this time the disease is usually in a late and hopeless stage. Most cancers are curable if removed in the early stage and the early warnings are heeded.

The cure of cancer at the present time is not a drug, serum, ray or miracle, but simply the education of the people as to the signs of its beginning in local

lesions and the importance of an immediate examination which will lead to recognition and treatment in the most favorable stage for a cure.

Dr. Miles F. Porter of Fort Wayne discussed the paper.

Adjournment. Attendance 370.

R. H. BEESON, Secretary.

FIRST DISTRICT MEDICAL SOCIETY

The First Indiana Councilor District Medical Society held its annual meeting at the Y. M. C. A. Building, Evansville, on the 25th day of May, under the direction of Dr. A. M. Hayden, president; Dr. H. G. Weiss, secretary-treasurer, and Dr. J. Y. Welborn, councilor.

The committee on Constitution and By-Laws presented a form that they recommended, which was discussed by the physicians present and adopted as read.

The election of officers resulted in the following choice: President, Dr. Henry Nennecker; secretary-treasurer, Dr. H. G. Weiss, and councilor, Dr. J. H. Willis.

The following program of unusual interest was rendered and elicited a lively discussion: Spinal Anesthesia, Dr. J. W. Phares; Nausea and Vomiting of Pregnancy, Dr. Pierce McKenzie; Diagnostic Methods, Dr. J. Y. Welborn.

The Vanderburgh County Medical Society extended an invitation to the society to meet in Evansville as their guest in 1922. The invitation was accepted and it was decided to hold the next annual meeting at Evansville on the 25th day of May, 1922.

Adjourned. H. G. WEISS, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

GUAIACO BENZOATE.—BENZOSOL.—The benzoic acid ester of guaiacol benzoate is slowly decomposed in the intestinal tract into benzoic acid and guaiacol, which exert their usual action. It is said to be useful in the incipient pulmonary tuberculosis, as an intestinal antiseptic and a urinary antiseptic.

GUAIACOL BENZOATE-SEYDEL.—A brand of guaiacol benzoate N. N. R. Seydel Manufacturing Co., Jersey City, N. J.—(*Jour. A. M. A.*, June 4, 1921, p. 1575).

SALIGENIN-ABBOTT.—A brand of saligenin N. N. R. For a discussion of the actions, uses and dosage of saligenin, see New and Nonofficial Remedies 1921, p. 35. Abbott Laboratories, Chicago.

SANTYL CAPSULES 7 DROPS.—Each capsule contains 7 drops of Santyl. See New and Nonofficial Remedies 1921, p. 270. E. Bilhuber, Inc., New York.

SILVER SALVARSAN.—A brand of silver arsphenamine N. N. R. For a description of the actions, uses and dosage of silver arsphenamine, see *Jour. A. M. A.*, May 7, 1921, p. 1312. Silver Salvarsan is marketed in ampules containing respectively 0.05 Gm., 0.1 Gm., 0.15 Gm., 0.2 Gm., 0.25 Gm., 0.3 Gm. silver salvarsan. H. A. Metz Laboratories, New York.—(*Jour. A. M. A.*, June 11, 1921, p. 1654).

PITUGLANDOL-ROCHE.—An aqueous solution containing the active constituents of the posterior lobe of the pituitary gland of cattle, free from preservatives. It is physiologically standardized on the isolated uterus of the virgin guinea-pig so that 1 Cc. responds in activity to 0.003 Gm. betaiminazolylethylamine hydrochloride. For a discussion of the actions and uses see General Article, Pituitary Gland, New and Nonofficial Remedies 1921, p. 219. Pituglandol-Roche is marketed in ampules, each containing 1.1 Cc. Hoffmann LaRoche Chemical Works, New York.

POLLEN ANTIGENS-LEDERLE.—Liquids obtained by extracting the dried pollen of plants with a liquid consisting of 67 percent glycerine and 33 percent saturated solution of sodium chloride. For the actions and uses of pollen extract preparations, see New and Nonofficial Remedies 1921, p. 239. Pollen antigens-Lederle are supplied in 15 pollen unit strengths. They are marketed as follows: Series A, containing five vials containing, respectively, 1.5 3, 6, 12 and 15 pollen units. Series B, five vials containing 18, 30, 45, 60 and 90 pollen units. Series C, five vials containing, respectively, 150, 225, 300, 450 and 600 pollen units. Complete Series, containing the fifteen doses of Series A, B and C. Diagnostic Test, containing 0.01 Cc. of a dilution representing 60 pollen units.

POLLEN ANTIGEN-LEDERLE (RAGWEED).—A liquid prepared by extracting the proteins from the pollen of the ragweed.

POLLEN ANTIGEN-LEDERLE (TIMOTHY).—A liquid prepared by extracting the protein from the pollen of the timothy. The Lederle Antitoxin Laboratories, New York.—(*Jour. A. M. A.*, June 18, 1921, p. 1753).

CHOLERA VACCINE (PROPHYLACTIC) - LEDERLE.—A cholera vaccine (see New and Nonofficial Remedies 1921, p. 299) marketed in packages of two 1 Cc. vials containing, respectively, 4,000 and 8,000 million killed cholera vibrios; also in packages of two 10 Cc. vials containing, respectively, 4,000 and 8,000 million killed cholera vibrios per Cc. The Lederle Antitoxin Laboratories, New York.

PLAGUE VACCINE (PROPHYLACTIC)-LEDERLE.—A plague vaccine (see New and Nonofficial Remedies 1921, p. 304), marketed in 1 Cc. vials containing 5,000 million killed plague bacilli; also in 10 Cc. vials containing 5,000 million killed plague bacilli per Cc. The Lederle Antitoxin Laboratories, New York.

ACNE MIXED VACCINE-GILLILAND.—A mixed bacterial vaccine (see New and Nonofficial Remedies 1921, p. 314) composed of B. acni vulgaris, Staphylococcus albus and Staphylococcus aureus in equal proportions. Marketed in packages of four 1 Cc. vials containing, respectively, 250, 500, 1,000, and 2,000 million killed bacteria; also in packages of four syringes containing, respectively, 250, 500, 1,000 and 2,000 million killed bacteria. Gilliland Laboratories, Ambler, Pa.

SUPRARENALIN.—Vials containing 1 grain suprarenalin (see *Jour. A. M. A.*, May 14, 1921, p. 1353). Armour and Co., Chicago.

SUPRARENALIN OINTMENT.—An ointment containing 0.1 percent suprarenalin (see *Jour. A. M. A.*, May 14, 1921, p. 1353), suspended in a petrolatum base. Armour and Co., Chicago (*Jour. A. M. A.*, June 25, 1921, p. 1826).

PROPAGANDA FOR REFORM

"NATIONAL IODINE SOLUTION" NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry considered National Iodine Solution, a proprietary of the National Drug Co., because inquiries indicated that it was brought extensively to the attention of physicians. The name implies that it is a solution of iodin, and the inference is given that it has the advantages of iodin without the disadvantages. According to the label, "each fluid ounce represents three grains Proteo-albuminoid compound of iodine (National)"; also an alcohol declaration of 7 percent is made. Otherwise no information is given as to the composition either of the "solution" or of "Proteo-albuminoid compound of Iodine". Analysis in the A. M. A. Chemical Laboratory indicated that each 100 c.c. contains about 7 c.c. of alcohol, 0.5 gm. of zinc sulphate U. S. P., 0.03 gm. iodin (the solution gave tests which indicated a very small amount of

free iodin; most of the iodin was in the form of ordinary iodid), 0.01 gm. protein and some hamamelis water. While the preparation is claimed to contain 3 grains "proteo-albuminoid compound of iodine", yet the sum of the protein and iodin is equivalent to less than one-fifth grain. The Council reports that it is evident that "National Iodine Solution" is not a solution of free (elementary) iodin as the name suggests; instead, it appears to be a solution of zinc sulphate in witch hazel water containing less than 0.03 percent of combined iodin and not more than a trace of free iodin; that it is sold under unwarranted therapeutic claims, and that a similar or identical preparation sold to the public for the self treatment of gonorrhea by the National Drug Co. as Gonocol has been declared misbranded by the Federal authorities.—(*Jour. A. M. A.*, June 4, 1921, p. 1592).

PROTEOGENS IN SYPHILIS.—C. F. Engels, Tacoma, Washington, reports that two persons came to him who had been treated with Proteogen No. 10 for almost a year. Both patients were four plus to the Wasserman test. He writes: "The tragedy of the whole thing is that here are two people, at least, who have been deprived of adequate treatment for a year, spending their money for ignorance and fakery, getting worse instead of better, and all because of the cupidity of these people (the promoters of the Proteogens) and their success of putting over on some of the weak sisters of the profession this pseudoscientific bunk". The Proteogens have been the subject of an extensive report by the Council on Pharmacy and Chemistry, which declared the twelve Proteogens inadmissible to New and Nonofficial Remedies because their composition is secret; because the therapeutic claims made for them are unwarranted, and because the secrecy and complexity of their composition makes their use irrational.—(*Jour. A. M. A.*, June 4, 1921, p. 1593).

REOLO.—This is a "patent medicine" which is based on the theory, which has no scientific foundation, that all disease is due to a deficiency or variation in the inorganic constituents—the "cell salts"—of the cells and blood. Reolo is claimed to furnish the needed cell salts and thus to cure diseases due to the deficiency. The asserted discovery of Reolo is described thus: "Dr. A. L. Reusing has finally succeeded in combining by electrical treatment the phosphates of calcium, sodium and iron with the phosphates of potassium and magnesium and has obtained a perfect combination of these revitalizing Cell Salts that he has named 'Reolo' . . ." The A. M. A. Chemical Laboratory reports that Reolo consists of grayish brown tablets having a sweet, chocolate-like and faintly bitter taste. Very small quantities of a phosphate and traces of Magnesium and of an iron compound were present. Large amounts of calcium carbonate (chalk) and sucrose (cane sugar) were present. The tablets did not appear to be medicated in the usually accepted sense. From this examination it would appear that Reolo is essentially a mixture of sugar and chalk.—(*Jour. A. M. A.*, June 11, 1921, p. 1697).

"ASPIRIN-BAYER" AND THE STERLING PRODUCTS CO.—Shortly after the United States entered the war, the Alien Property Custodian took over the property of Bayer and Co., Inc. The Sterling Products Co. acquired the pharmaceutical end of the Bayer concern. After that the Winthrop Chemical Co. was incorporated and seemingly secured control of all the Bayer pharmaceutical specialties, except "Aspirin". The Bayer Co., it was announced, had been merged with the Sterling Products Co., and "Aspirin-Bayer" added to the latter firm's list of "patent medicines": Cascarets, Danderine, Pape's Diapepsin, California Syrup of Figs, Neuralgine and Dodson's Livertone. Just what relationship exists between the Winthrop Chemical Co. and the Sterling Products Co. we do not know; the "Bayer Cross" is used on the label of the Winthrop products. As the court has ruled that on prescriptions calling for "Aspirin" the Bayer product must be dispensed, physicians should prescribe acetylsalicylic acid and not "Aspirin".—(*Jour. A. M. A.*, June 11, 1921, p. 1697).

DISAPPOINTMENTS IN ENDOCRINOLOGY.—In the current enthusiasm for so-called endocrinology, medicine may become humiliated by the drift toward a sort of pseudoscience bolstered up with meaningless words and unfounded assumptions. Stewart deserves the thanks of the medical profession for the fearless and critical manner in which he has questioned (Endocrinology, vol. 5, p. 283 (May) 1921) much of the verbal rubbish that goes under the designation of the endocrinology of the suprarenals. There is something stinging, yet deserved, in its implied rebukes, in the words of Dr. Stewart: "On the whole," he says, "it must be granted that hitherto the attempts made to evoke in animals a well marked syndrome characteristic of adrenal deficiency have been singularly disappointing. The contrast is great when we leave this desert, where the physiologists and experimental pathologists have wandered, striking many rocks but finding few springs, and pass into the exuberant land of clinical endocrinology, flowing with blandest milk and honey, almost suspiciously sweet." How much longer will the medical profession continue to merit such criticism? Just so long as the profession continues to give serious consideration to pseudoscientific rubbish promulgated by the exploiters of organic extracts.—(*Jour. A. M. A.*, June 11, 1921, p. 1685).

MON-ARSONE NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry reports that Mon-Arsone was put out by the Harmer Laboratories Co. as "A new and non-toxic arsenical for the treatment of syphilis" and that it was claimed that the drug had a therapeutic value equal to arsphenamine but was devoid of toxic action. Chemically, Mon-Arsone is related to sodium cacodylate, which latter has been proved inefficient in the treatment of syphilis. After examining the available evidence, the Council voted not to admit Mon-Arsone to New and Nonofficial Remedies and held that the claim that Mon-Arsone has a therapeutic value equal to that of arsphenamine was unwarranted; that Mon-Arsone should not be used except under conditions that justify the experimental trial of an unproved drug, and that the advertising propaganda for the drug by the Harmer Laboratories Co. as to be deprecated. When the Council sent its report to the Harmer Laboratories Co., prior to publication, the firm announced that the claim that Mon-Arsone is therapeutically equal to arsphenamine had been abandoned. In publishing its report, the Council endorsed the recent warning against the use of untried medicaments issued by the U. S. Public Health Service. It also calls attention to a report on the effect of Mon-Arsone on experimental syphilis recently published by H. J. Nichols, which showed that the drug, when tested on rabbits infected with experimental syphilis, showed no spirocheticidal power.—(*Jour. A. M. A.*, June 18, 1921, p. 1781).

ITTIOLO is an ammonium sulphoichthyolate preparation, manufactured in Italy by the Societa Industrie Chimiche (Guiseppi W. Guidi, New York, agent). The A. M. A. Chemical Laboratory analyzed two specimens of Ittiolo and found that they differed in several particulars from the New and Nonofficial Remedies requirements for the product. The American agent for the product was informed of the results of this analysis. He was advised that Ittiolo

would be omitted from New and Nonofficial Remedies unless standards for it were received within a reasonable time which would correctly indicate its composition. At the expiration of three months the Council had received no assurance from the American agent that any effort was being made to standardize Ittiolo or to insure the uniformity of its composition. Accordingly the Council directed its omission from New and Nonofficial Remedies (Rep. Council Pharm. Chem., 1920, p. 64).

LIBRADOL (manufactured by Lloyd Bros.), according to a "readily removable label" on a trade package, may be used in "colds, croup and acute bronchitis, in local congestions, in lung troubles and acute inflammations of this or any other organ, especially if pain or soreness be present, in lumbago, sciatica or in rheumatic pains of the joints or muscles. Applied to the forehead, it induces sleep." Libradol is offered in two forms, "Libradol Mild" for infants and supersensitive persons which is said to be "destitute of drug energy", and Libradol "Regular" which is "highly medicated", the "constituents" being "Dracontium, Sanguinaria. Cephaelis, Melaleuca, Lobelia, Laurus, Capsicum, Tobacco". An examination of the information submitted by Lloyd Bros. showed Libradol to be in conflict with the principles and rules that govern in the acceptance of articles for New and Nonofficial Remedies: 1. Composition: The information gives little idea as to the actual composition of the preparation. 2. Indirect advertising: The recommendations for the use of Libradol which appear on the trade package is prone to lead the public to depend on it in cases where definite treatment is imperative. 3. Unwarranted therapeutic claims: Libradol is recommended in a great variety of conditions and is especially claimed not only to relieve pain, but to remove the cause of pain. No evidence for the claim was submitted. 4. Name: The name, derived from Dolor, and Liber, suggests the claimed action of the preparation (the relief of pain) rather than the composition. 5. Irrational composition: It is quite possible that Libradol will relieve pain in certain instances, but this is no justification for the use by physicians of cataplasms containing or made from skunk cabbage, bloodroot, ipecac, melaleuca (oil of cajeput), lobelia, laurus camphora (camphor?), capsicum and tobacco. The combination is thoroughly irrational.

The Council declared Libradol inadmissible to New and Nonofficial Remedies because its composition is complex, irrational and semi-secret, and because its name and the unwarranted therapeutic recommendations made for it will lead to its ill-advised use (Rep. Council Pharm. Chem., 1920, p. 65).

BOOK REVIEWS

PULMONARY TUBERCULOSIS WITH CASE HISTORIES, by Edward O. Otis, A.B., M.D., Professor of pulmonary diseases, etc. Second edition, cloth, 220 pages, $3.50, Boston. W. M. Leonard Publishing Company, 1920.

This is one of the very valuable case history series by the same publisher. While it is intended for the medical student and general practitioner, yet it has been adapted for the needs of the lay reader and is especially valuable to the tuberculosis worker. It deals with the many problems connected with the diagnosis and management of tuberculosis cases. Case histories offer one of the very best methods of teaching, inasmuch as they approach the real clinic. The histories that have been included in this work cover every phase of the subject, including diagnosis, differential diagnosis, artificial pneumothorax and treatment. Of especial interest is the chapter on examination of soldiers for tuberculosis, and the essential points in the physical examination, as recommended by the government experts, may well be adopted in civil life.

TREATISE ON FRACTURES. By John B. Roberts, A.M., M.D., F.A.C.S. Emeritus Professor of Surgery in the University of Pennsylvania Graduate School of Medicine; President of the American Surgical Association; and James A. Kelly, A.M., M.D., Associate Professor of Surgery in the University of Pennsylvania Graduate School of Medicine; Attending Surgeon to St. Joseph's, St. Mary's, St. Timothy's and Misreicordia Hospitals. Second Edition. With 1081 illustrations: Radiograms, Drawings and Photographs. Philadelphia and London: J. B. Lippincott & Company.

This work has been, for this second edition, entirely rewritten and reset. In its present form it is one of our most valuable and authoritative books on the subject of fractures. The authors have profited by the clinical opportunities of the World War and have revised many of the methods of treatment advocated in the first edition. Every surgeon can now agree with the statement in the preface that "Lane's insistence that closed fractures need operative fixation with steel plates, as a usual routine, has been found to be an untenable creed. Treatment of fractures of the femur and of the tibia by suspension, long ago advocated by N. R. Smith, Hewson and Hodgen in this country, and by others in Europe, has been reinstated in general favor." In the preface, as well as in the body of the book, the authors stress the fact that the radiographic study of fractures is frequently deceptive and the reviewer feels that this point cannot be emphasized too frequently. The first six chapters deal with the general considerations of fractures and cover in a most satisfactory manner such subjects as Epiphyseal Separations and The Operative Treatment of Closed Fractures. The seventh chapter is devoted to the consideration of Fractures of the Cranium—this chapter is, for the most part, a very valuable one. However, the authors fail to indicate that the solution of the problem of when to operate in basal fractures depends almost wholly on the presence or absence of the symptoms of intracranial pressure. Sufficient attention is not directed to the value of the decompression operation. The remaining twenty-four chapters systematically handle the fractures of the various parts of the skeletal system. The authors do not seem entirely to accept Jones' Golden Rule for the treatment of elbow joint fractures, but they do recognize the value of Whitman's method of dealing with fractures of the femoral neck. Particular attention and praise must be given to the ten hundred and eighty-one illustrations—the reviewer can recall no similar book which has so many valuable radiograms and photographs. If this book were widely studied and its teachings adopted there would be far fewer cripples in America. The authors are eminently correct in claiming that "if the same degree of attention was given to fractures as is given to abdominal surgery, there would be better results obtained."

OPERATIVE SURGERY. By John J. McGrath, M.D., F.A.C.S. Professor of Surgery, Fordham University: Consulting Surgeon to the People's Hospital: Visiting Surgeon to the Fordham, Columbus and New York Foundling Hospitals, etc. Sixth Revised Edition. Price $8.00. Philadelphia: F. A. Davis Co.

Since its first appearance in 1902 this book has passed through six editions—this fact is a sufficient

(Continued on Advertising Page xviii)

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commendation for any medical text book. The author states that he has spent much time and effort in the preparation of this sixth edition and he has certainly covered his field in an excellent manner. Much space is rightly devoted to surgical anatomy and the various operative procedures are clearly and accurately described. In an Operative Surgery of eight hundred and fifty pages many descriptions must be abbreviated and others omitted. The reviewer feels that it was a mistake to devote eight and one-half pages to a description of three methods of extirpating the Gasserian Ganglion while ignoring Spiller's operation of sensory root section. This book, however, can be highly recommended to students and practitioners who desire a single volume text book on operative surgery.

MEDICAL ELECTRICITY, ROENTGEN RAYS AND RADIUM, with a practical chapter on PHOTOTHERAPY. By Sinclair Tousey, M.D., Consulting Surgeon to St. Bartholomew's Clinic, New York City. Third edition. Thoroughly Revised and Greatly Enlarged. Octavo of 1337 pages with 861 practical illustrations, 16 in colors. Philadelphia and London: W. B. Saunders Company, 1921. Cloth $10.00 net.

The third edition of this important work appears in a greatly enlarged and thoroughly revised form. Most of the new matter has been added to the sections which are devoted to the x-ray. Recent advances in gastro intestinal radiology are sufficiently described. Much attention has been given to the technic of dental radiography and the interpretation of dental films—no other text book so well describes this important subject. It is interesting to note that, in the author's opinion, the surgeon should be given the radiograph and not merely the radiologist's report of his examination, because, if the surgeon sees that "the picture is a mere, foggy daub" he will not run the risk of performing a useless operation. It is rather surprising that the author makes no mention of Dandy's work on cerebral ventriculography. In the opinion of the reviewer, more attention should have been given to the present day methods of pyelography. However, this book covers the rest of its field so well that it should be in the possession of every man who is at all interested in the subjects of medical electricity and the Roentgen rays.

INFECTIONS OF THE HAND. By Allen B. Kanavel, M.D., Assistant Professor of Surgery, Northwestern University Medical School; Attending Surgeon, Wesley and Cook County Hospitals, Chicago. Fourth edition, thoroughly revised. Illustrated with 185 engravings. Price $5.50. Philadelphia and New York: Lea & Febiger, 1921.

A more valuable monograph than Kanavel's Infections of the Hand has never been published on any similar surgical subject. This fourth edition "has given the author the opportunity of supplementing the text with the knowledge gained during the great war upon gas bacillus and streptococcus infections as well as permitting the addition of a chapter upon the restoration of function in infected hands". Previous editions have been adequately reviewed in THE JOURNAL. The new chapter on the restoration of function is a very valuable addition to the work. As the author remarks, "The after treatment of patients suffering from injuries and infections of the hand is frequently so neglected, or carried out in such a haphazard manner, that the ultimate results fall far short of what might be attained." The various agencies which may be employed for aiding the return of function are carefully described. The reviewer would urge every physician who attempts to treat injuries and infections of the hand to study and follow the teachings of Kanavel.

ABSTRACTS

MEDICAL AND MEDICOSOCIAL PROBLEMS OF THE HOUR

In the opening sentence of his presidential address read before the American Medical Association at the Seventy-Second Annual Session, Boston, June, 1921, HUBERT WORK, Pueblo, Colo. (*Journal A. M. A.*, June 11, 1921), says, there is no common meeting ground except that of service. The American Medical Association is a body representing more than 80,000 trained medical men. It is the Plymouth Rock of American medicine, and we may look back through its history, and therein trace the evolution of the healing art. It is our national health service, and the common meeting ground of its members. Its special societies refine and polish its parts, which are here assembled into a working whole of contributed, coordinated, scientific, practical medicine. Its official journal is the recognized authoritative recourse for medical and for lay minds alike. The governing purpose of this association is to collect and disseminate the truth in medicine, to perfect the science, to expose pretense, and to elevate medical men, further to encourage and associate individual efforts, and to bind medicine to the government, its armies and its municipalities. And it hopes that the church and public charities, through the common tie of human sympathy—the hall mark of a Christian civilization—may also join with it for the greatest good to the greatest number. Among the special subjects discussed by Work are: graduate teaching, health centers, hospitalization, group practice, standardization of medical colleges and hospitals and the elevation of the standard of surgeons.

BASAL METABOLISM IN BORDERLINE CASES

Sixty-eight cases of hyperthyroidism were studied by Charles G. Beall, Fort Wayne, Ind. (*Journal A. M. A.*, June 11, 1921), with the object of comparing the clinical diagnosis with the basal metabolism. He found that an increase in the basal metabolism of 10 percent is present in two-thirds of the cases presenting clinical signs and symptoms of mild hyperthyroidism. An increase in the basal metabolism of 10 percent is present in one-fourth of the cases in which the clinical signs and symptoms were not considered sufficient to warrant a diagnosis of hyperthyroidism as being the prime factor in the diseased condition. As the basal metabolism rose, the percentage of cases clinically falling into the hyperthyroidism groups increased rapidly.

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Next Annual Session, Indianapolis, September 28, 29, 30, 1921. List of Officers and Committees on Adv. Page 2.
Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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By T. BRAILSFORD ROBERTSON, Ph.D., D.Sc., Professor of Physiology and Biochemistry, University of Adelaide, South Australia; formerly Professor of Biochemistry, University of Toronto; Professor of Biochemistry and Pharmacology, University of California. Octavo, 633 pages, with 49 engravings. Cloth, $8.00 net.

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ORIGINAL ARTICLES

THE INDICATION FOR MASTOID OPERATION*

G. HENRY MUNDT, M.D.
CHICAGO, ILLINOIS

Because of the character of the body to which this is presented I will refrain from considering those cases that are so plainly operative that anyone can see it. I refer especially to the subperiosteal mastoid abscess. I am well aware that some subperiosteal mastoid abscesses in very young children may be successfully drained by a myringotomy, but it is my opinion that opening the mastoid itself is to be preferred in a large proportion of cases. Here I cannot refrain from quoting that pioneer in this work, Fredrick Whiting: "As a general proposition we may affirm that whenever Whild's incision is indicated a mastoid operation is imperative."

Because of the enormity of the subject of mastoid complications their consideration will be omitted.

What I will make an effort to present to you is a stimulus to base judgment on the advisability of mastoid operation more on the objective than the subjective symptoms of the patient. In other words, it is my opinion that one should have quite clearly in mind the changes that are taking place in a mastoid process; try to visualize the bone changes, and on this knowledge base an opinion about operation, keeping in mind that it is an osteomyelitis the same as in any other bone.

One should remember, as Dench says, that the mastoid is simply one part of the middle ear, that every case of acute middle ear inflammation is really a mastoiditis, and that an ear recovering by either incision or spontaneous discharge is a mastoiditis recovering with a minimum of surgical interference. Simply because a mastoid is pervaded with pus is not in itself an indication for operation. Thus one must not advise operation when he sees a cloudy mastoid on roentgenogram, but must look farther to determine whether there is bone involvement.

I now wish to make a definite statement by which the need of operation in every case can be definitely weighed. A mastoid which is once the seat of definite bone involvement is operative at once and will remain so until the end of the process unless in its progress it develops that it is one of the cases which goes on to either entire sclerosis or eburnation, or is the seat of a slow necrosis followed by epidermization of the mastoid and middle ear which is virtually a radical operation by nature.

One of the most difficult types of mastoiditis to diagnose is the closed mastoid, which is infrequent though it does exist. I mean that type of mastoiditis in which there is no concurrent demonstrable involvement of the tympanum proper, the antrum being closed off from the tympanum either by bony atresia of the additus ad antrum, or by hypertrophy or hyperplasia of the mucoperiosteum of the attic. This condition may be brought about in the former (bony atresia of the additus ad antrum) by a blood borne infection, and in the latter by either a blood borne infection or by infection entering the mastoid process from the middle ear and the mucosa swelling, the middle ear clearing perfectly, at least showing no signs of acute trouble, while the mastoid process is the seat of acute inflammation. When pain and tenderness develop in the mastoid region with no visible changes in the middle ear, the patient needs the closest observation. Teeth as a causative factor as well as all neuralgia should be eliminated, and acute inflammation of the soft tissue over the mastoid should be eliminated. Leucocytosis is suggestive; blood cultures may give some information; general febrile reaction when all other areas are eliminated speak for infection; changes in the external soft tissue or enlargement of the post cervical glands bespeak mastoiditis; but it is my opinion that a well made, properly interpreted roentgenogram will give more definite information than anything else in this condition. The diagnosis of a closed mastoid is a definite indication for posterior drainage. This type of mastoiditis may be easily confused, and I think very often is, with the mastoiditis in which there is no redness of

*Read before the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association at the South Bend session, September, 1920.

the membrana typmani, but it is lusterless, with changes in the appearance of particularly the handle of the hammer, indicative of fluid in the middle ear. These cases eventually will have posterior drainage, so delay is of no value.

We now come to the consideration of the mastoid with otorrhea. I am presupposing that furunculosis of the external auditory meatus has been eliminated. The advent of acute otitis media in a patient with an old purulent otorrhea is a rather definite indication for posterior drainage.

Pain is the one condition which will cause the patient to demand relief. If after free incision of the membrana typmani pain persists for one or two days, or tenderness for three days, operation is probably indicated. Dench says that in the patient where pain is the indication for operation the mastoiditis is of the hemorrhagic type and the cells are extensively developed. Tenderness as a symptom is at times very valuable. However, the amount of tenderness is very largely dependent upon the anatomical characteristics of the mastoid. Given a very thin cortex it will be found early and may be very general, while with a thick cortex it may never be elicited. Tenderness lasting any considerable length of time probably bespeaks the need of operation, as it probably indicates more bone involvement than just inflammation of the mucoperiosteum. The recurrence of tenderness after it has subsided during an acute otitis media probably means definite bone involvement and indicates the need of operation.

Temperature is of little import usually. Some severe cases carry little febrile reaction, while others less severe have considerable elevation of temperature. The temperature is largely dependent upon the freedom of drainage and the character of the infection. With all other classical symptoms of mastoiditis, with a constant high temperature, or with sudden rise or fall of temperature, with or without rigors, the mastoid should be opened. It is my opinion that in a patient with the classical symptoms of mastoiditis requiring operation, the fact that he may have a normal temperature does not in any way negative the advisability of operation.

Persistent bulging of the membrana flaccida and narrowing of the canal at the fundus by sagging of the posterior-superior wall is an almost pathognomonic indication for operation. A persistent sagging of the posterior-superior wall of the canal I think indicates an osteomyelitis which in all probability will not recover until operated.

In an adult when there is enough trouble to cause redness and swelling over the mastoid it should be operated without delay, as there is nothing to be gained by waiting, and an early operation may save the patient from a severe complication, as the same process that produces redness and swelling by involvement of the cortex may cause trouble in the brain or sinus. In nearly all patients with acute suppurative otitis media some changes in the soft tissues attached or adjacent to the mastoid will be found, and the posterior cervical glands will be involved, this condition in itself being of no operative importance. Extension of infection (pus) into the glands of the neck or drainage through the mastoid under the sternomastoid muscle (Bezold abscess) demands operation.

Given a patient with an enormous discharge, more than could be expected from the middle ear and mastoid, *i. e.*, it runs out, operate at once. Sudden cessation or marked diminution of discharge, with increase in severity of symptoms, if the opening in the drum membrane has not closed, is a rather positive indication for operation.

The organism found in the discharge is very important. However, the smears and by all means cultures should be taken from the middle ear through the perforation, or the canal should be cleaned and the specimen taken as it exudes from the middle ear. This is very important, as cultures taken from the external auditory meatus, unless proper precautions are taken, are sure to be contaminated.

The streptococcus mucosus capsulatus is one of the strongest indications for operation, because it is especially liable to produce severe complications, being an eroding type of organism. In a patient with streptococcus mucosus capsulatus mastoid if operation is delayed, even though the perforation in the drum membrane heals, the closest watch should be kept for many months, as this particular organism may remain dormant or at least mildly active and suddenly cause the gravest trouble. Pneumococcus accompanied by micrococcus catarrhalis is almost a positive indication. Streptococcus pyogenous infection demands operation. Pneumococci alone or with staphlococci, or staphlococci alone is of much less importance.

In the average patient an acute otitis media should heal in a maximum of three weeks, and if it does not it probably will not heal until the mastoid is opened. There probably will be no danger in waiting longer if none of the definite operative indications have appeared. However, by this time the future course of the condition can probably be foreseen by a well made, properly interpreted roentgenogram.

Finding a sequestrum or bone dust in the discharge is a positive indication for operation as the condition will never heal until operated.

Leucocytosis is usually present (11000-18000), the polymorphonuclear neutrophiles being increased from the normal of 72-75 percent to 85-90 percent. If there is bacteriemia by way

of sinus or smaller vessels there is apt to be higher leucocytosis (25000-30000) and this is a rather positive indication. Blood cultures are of distinct value, as positive cultures with an important organism would indicate operation.

When symptoms continue after a good free incision of the membrana typmani it is probably folly to repeat, and the mastoid may as well be opened at once as to wait. Dench says "I have only one word for repeated incisions of the drum membrane and that is a word of absolute condemnation".

Profound involvement of the hearing function over a period of one to three weeks, when there is a free incision of membrana typmani, calls for operation. Heath is much less conservative on the time element and advises practically immediate operation when there is marked deafness, to preserve the hearing as well as to shorten the period of disability.

Marked mastoid symptoms intervening in the course of the acute exenthematous diseases call for more prompt operation than the ordinary case.

In nearly every patient with chronic otitis media it is necessary to attack the mastoid to cure the discharge. Caries, which may be demonstrated by polypi formation, granulation tissue, bone dust or sequestrum, demands operation. Perforation in the superior or posterior portion of the drum membrane probably indicates operation. Certainly cholesteatoma formation which may be recognized by finding sodden masses in the external auditory meatus, or where the cholesteatome may be seen, demands operation. Periodic mild pain in mastoid or ear during chronic suppuration demands operation. Certainly marked acute exacerbation in a chronic suppuration is one of the strongest indications for operation. Mastoid fistula demands operation. Properly qualified facial paralysis demands operation. Labyrinthine irritation indicated by vertigo in a chronic suppurative otitis media should be operated.

I now want to discuss very briefly what I consider one of the most valuable methods we have at our disposal to interpret mastoid disease, the roentgenogram. To get information of value the two mastoid areas must be rayed and compared. It has been amply demonstrated that in a very large proportion of persons the mastoid bone development is practically the same on both sides. To become competent to interpret mastoid roentgenograms one should work out with his roentgenologist a position to be used and follow it with all patients. Then there are certain technical Roentgen methods with which I am not conversant, which must be caried out by the roentgenologist to get detail. Stereoscopic plates are much better for study, it being possible to get a clearer idea of anatomic detail. However, a well made flat plate is of practically as much value in determining the amount of bone involvement in a mastoid.

In practically every acute suppurative otitis media a roentgenogram will show the mastoid cloudy because it is pus filled, but this finding is of no operative importance, as the mucous membrane in the mastoid is as competent to heal as is the mucosa of the tympanum after it is pus filled. If while the mastoid is cloudy, or later, the intercellular septa show some breaking down, it is my opinion that the mastoid had as well be opened then as later, as it will probably never heal until it is opened.

In the type of acute mastoid which Beck calls cell route or confluent mastoiditis, the roentgenogram interpretation is more difficult. However, much of value can be gained by study of a series of plates. The progress of acute mastoiditis can well be watched and much of value can be learned by study of plates made a few days apart. In the chronic suppurative ear if it is feasible to procure a roentgenogram it should be done before operation, not alone for information of pathology present but for study of anatomic detail. When in a chronic suppurative otitis media there is a distinct breaking down of septa, or even partial sclerosis, the mastoid should be operated.

In closing I wish to say that in a questionable case the error had better be one of commission than omission, for as Grant says, "the responsibility is greater to decide against than for operation."

DISCUSSION

DR. W. S. TOMLIN (Indianapolis): In enumerating the different indications for mastoid operations it seems to me that the subject has been very thoroughly covered. Perhaps if anything was left out it was reference to the consent of the patient or the patient's guardian—and we all know that consent to operate sometimes is more difficult to obtain than it should be, from the fact that the general public is not well educated to the fact that not only is the life of the patient in danger, but what is of very great importance also, the hearing power is very much endangered by a continuing otitis media with suppuration, especially if there is indication of pathology in the mastoid cells or tendency towards breaking down of the bony structure.

I would like to emphasize that the operator or examiner should attempt to visualize the pathology of the situation, or what is going on in this diseased ear. Is it a process of bone disintegration, or is it a process of mucous inflammation? When he is able to visualize his

cases he will be able to arrive at conclusions that are worthy of being quoted.

The essayist has presupposed, and quite properly, that other things being equal a profuse discharge, acute or sub-acute, does not of itself, and without regard to other conditions, indicate a mastoid operation; that with a profuse discharge you will readily know that the enormous quantity, comparatively speaking, is not coming from the tympanic cavity, and that such a discharge would not be coming from the mere surface of the membrane but from the deeper tissues, more cells being affected than are on the surface. The origin of this otitis is a very important thing. Otitis that follows scarlet fever is in a very large percentage of cases operable almost from the start because the peculiarity of the infection lies in the fact that it is particularly prone to attack the deeper structures, and one need not wait in the hope that the inflammation will subside, as he might if it followed simply an acute coryza.

Some of these cases of chronic otorrhea are continuously dependent upon associated conditions. They may have had their origin from infected sinuses or from an accumulation of adenoid hypertrophy, or from an infection in the epipharynx, and those cases do give some real hope of recovery when otherwise they would not be subject to a postponement of operation. It is my belief that where the general health of the patient seems to be fair, and the individual has a considerable resistance and recuperative power, the clearing up of a frontal sinusitis or a sphenoidal sinusitis will result in the recovery of a case that otherwise might be considered hopeless, so far as getting along without an operation is concerned.

There is one other thing that we should visualize in connection with these cases, and that is the position of the patient and the patient's guardian. From a personal experience I may say that it will appeal to you quite differently if you can imagine yourself at the other end of the scalpel. Try to place yourself in the other man's place. If this child were yours and you were inclined to operate within a week of the beginning of an acute otitis media, would you consent to have the child operated in so short a time, when there were no other menacing symptoms than acute otitis media with a mastoid involvement? Would you, placing yourself in the position of the father of that child, be willing to have that child subjected to an operation at once, without waiting to see if something else could not be done? Or place yourself in the position of the business man whose time is of importance, and whose hearing is of importance. If you can make up your mind that if you were so situated you would not be willing to take a chance on the further destruction of your hearing by the continuation of this otorrhea, then I think you may operate with impunity.

DR. GEORGE W. SPOHN (Elkhart): I am sorry that Dr. Mundt did not mention the subject of vaccines. I wish the discussants would bring out that question, and present their opinions for or against vaccines in mastoid therapy.

There is no doubt that all chronic cases of mastoiditis should be operated after they have run two or three months. In regard to the acute condition, I believe, as Dr. Tomlin said, that we should put ourselves in the place of the patient. I believe that if we did so, very few of us would allow ourselves to be plunged into an operation at once without giving due consideration to the case.

In regard to advising an operation because of pain and discharge: I am not in accord with the quotation from Dench, made by the essayist, that he did not believe in repeating incisions of the drum. I do, and also I believe in the use of the suction pump.

I never could get a roentgenogram made by a roentgenologist so perfect that I could say positively what the condition of the mastoid cells was. By taking both mastoids together, and if we could have a roentgenogram so accurate that we could say positively that the pus is occluded in the mastoid cells, of course we would have an operation. But can we get such a skiagraph? I have never seen one. The skiagraph is only one of the means of diagnosis, and should be considered with all the other clinical symptoms.

The best treatment that I have found in the acute cases is the use of the mixed streptococcus or autogenous vaccines. The use of them will stop the symptoms of pain, and the swelling and discharge will subside in a very short time. If we have an involvement of the lateral sinus we must operate. If we have an involvement of the glands anterior to the ear we know positively that it does not come from the mastoid cells. I try to avoid operating in practically all acute cases. Most cases can be cured by the use of the autogenous vaccines. A good autogenous vaccine, or a good stock vaccine given on alternating days, beginning with a quarter of a cc., and the next day a half cc. and then three-quarters cc., and then one cc. and never above that, will give splendid results.

DR. M. H. KREBS (Huntington): I have found that the absence of pain does not at all negative a diagnosis of mastoiditis, or the indication for operation. I have in mind one instance where there was complete absence of pain, and the indication for operation was made entirely by the x-ray and stereoscopic picture. Of course it is very difficult to get stereoscopic pictures that are absolutely accurate, but when

we have one that is fairly reliable we have a picture of the mastoid in three dimensions. We are then enabled to see the exact conditions, and are in better position to go into the operative field.

As I understood the essayist, pain seemed to be greater with a sclerotic mastoid with a thin cortex. My experience has been just the opposite. I have noticed that I have more pain in patients who, upon operation, show a mastoid of the sclerotic type with a thick cortex, than in those with a mastoid with a thin cortex and of the pneumatic cell type. This I have ascribed to greater resistance of the bony structure.

I do not open up the mastoid in acute conditions, preferring to wait several days until a large portion of the cells have broken down, as shown by the x-ray picture.

DR. HARRY BOYD-SNEE (South Bend): I wish to emphasize the consideration of the bacteriological factor as an indication for mastoidectomy, particularly in those cases from which streptococcus mucosus capsulatus can be isolated by culture. I should like to hear from him on this subject, and I wish to go on record as being of the opinion that isolation of the streptococcus mucosus capsulatus by culture from either an acute or a chronic suppurative otitis media is of itself an absolute and imperative indication for immediate operation. My opinion is based on observation and study of a group of 312 cases of streptococcic osteomyelitis of the temporal bone with involvement of the mastoid and coincident suppurative otitis media on which mastoidectomy was done. In no case when mastoidectomy was done immediately, where the streptococcus mucosus capsulatus was recovered from the middle ear, did we uncover a condition within the bone that would contra-indicate the operation, and cultures obtained from the infiltrated bone were streptococcus positive in every case.

A fine point set forth by Dr. Mundt is the fact that notwithstanding complete subsidence of otitis media, as evidenced by closure of perforation, clearing of drum membrane and restoration of auditory function, we can look for and we may find present an active osteomyelitis within the mastoid or adjacent bony structure. Complete resolution of an otitis media from which the streptococcus mucosus capsulatus has been recovered does not exclude osteomyelitis.

DR. D. O. KEARBY (Indianapolis): I would like to emphasize the value of the free incision of the drum membrane under anesthesia and after waiting perhaps ten or fifteen minutes, the removal of the blood clot that forms at the point of incision.

Another point about the roentgenogram that I have not heard mentioned, and to which it seems to me attention should be called, especially in adult cases, is the type of sclerotic bone that will be found due to an old acute mastoiditis that the patient may have had when a child, and has gone unrecognized. In three or four of our cases we have had just such a circumstance brought to our attention when we operated,—a positive picture, and when we operated, we found a sclerotic mastoid.

DR. ALBERT E. BULSON, JR. (Fort Wayne): Dr. Mundt's paper covers the subject so thoroughly and yet concisely that but little can be added.

I desire to emphasize what he has said concerning the presence of inflammation or even pus in the mastoid as not in themselves being an indication for operation. As a matter of fact, there are altogether too many men who accept tenderness over the mastoid—even a few hours or a few days after the onset of the middle ear symptoms—as an indication for operation, and they proceed to rush the patient to the hospital and do a simple mastoid operation, which in all of the cases at that stage of the trouble is unnecessary, and probably in 75 percent of the cases never would be necessary if appropriate treatment was adopted. I sometimes think that it is knavery rather than ignorance which prompts ear surgeons to do mastoidectomies under such circumstances,

Dr. Mundt's statement that an acute middle ear suppuration engrafted upon a normal ear usually can go three weeks before it becomes necessary to operate for accompanying mastoid complications, probably will hold true in the majority of instances, and the cases requiring operation earlier will be exceptions rather than the rule. As pointed out by the essayist, the character of the infection will have much weight in the decision.

Personally, I feel that too many of these cases do not have the proper attention prior to the development of mastoid complications requiring operative interference, and by that I mean early and free incision of the drum membrane, enhanced elimination by bowels, kidneys and skin, and rest in bed. A careful watch of the leukocyte count is very important, and I care more for it than I do for fever, pain and tenderness, though it is the composite picture which really decides the question of operation.

Practically all cases of acute suppuration of the middle ear are accompanied by mastoid tenderness, but that symptom alone is not an indication for operation. Sagging of the posterior superior wall of the meatus perhaps is one of the most important indications for operative interference.

So far as roentgenograms are concerned, the interpretation should be made by one who is experienced in the work, or many mastoids will

be opened unnecessarily. As pointed out by Dr. Mundt, mere cloudiness is not an indication for operation, but breaking down of the bony structure and extension of the cloudiness should be considered significant. On the whole, I think I have been led astray by roentgenograms more than I have been helped, for it is my experience that when the roentgenogram really indicates the necessity for an operation, there are other manifestations which already have pointed to the necessity for such attention.

DR. G. H. MUNDT (closing): I quite agree with Dr. Tomlin that in some cases, and probably in a considerable number of patients who have chronic otorrhea, a cleaning up of the condition of the nose or epipharynx will clean up the suppuration. I have had children with chronic suppurative otitis media who did not get well until we took care of their adenoids and tonsils, and then they cleared up.

Once the mastoid bone becomes involved, once there is established in the mastoid process osteomyelitis, it is my opinion that operation is indicated and that there is no use of doing anything else. You might just as well operate the mastoid as to wait. But given a clear mastoid, and a middle ear with polyps, if you can get the polyps out of the middle ear and clean up the epipharynx, it is my opinion that the condition may clear up.

In my paper I say, "In nearly every patient with chronic otitis media it is necessary to attack the mastoid to cure the discharge. Caries which may be demonstrated by polypi formation, granulation tissue, bone dust or sequestrum demands operation of the mastoid."

Relative to the use of vaccines, I did not take up the treatment of chronic otitis media because it was not considered as coming under the subject of the paper which is the discussion of the indications for operation.

Regarding repeated incisions, if you will read my paper you will find that I quoted from Dench on that. Personally I have incised the drum membrane more than once. Free incision, a very free incision, is undoubtedly indicated.

Regarding Dr. Spohn's inability to get roentgenograms which are valuable: I believe there are a large number of men who are not getting what they should from roentgenograms of the mastoid, or the accessory nasal sinuses. If one will take the time to get a definite position, I don't care whether he does it on flat plates or on stereoscopic plates, and if he will study some normal plates, and then have plates made of his mastoids, it will only be a little while until he will learn that he can get a great deal of value out of them. A mastoid which is pus filled means nothing, but when gradually the intercellular septa starts to break down, when you have a gradual enlargement of the pus-filled area with no intercellular septa, you have a definite osteomyelitis, and it is my opinion that you might just as well attack the mastoid then as any time.

The third discussant spoke on the subject of pain. I did not mean to bring pain in as an indication for operation, other than to say that there is the occasional patient with a hemorrhagic mastoid who has very intense pain which nothing relieves, and I think then one should open the mastoid.

I think Dr. Bulson is quite right in his statement regarding early operation in acute otitis media. I think that a man who hastens to open the mastoid in acute otitis media is all wrong. I put an arbitrary time limit there of three weeks, basing it on the statement made by Norvall Pierce a number of times that in his opinion the temporal bone started decalcification at about three weeks. But understand, I use three weeks as an arbitrary time limit; I don't believe that every mastoid should be opened at the expiration of three weeks.

Dr. Bulson's statement regarding the blood count also is right. The man who does not study his poly count, and frequently, in a questionable case, is making a great mistake.

I think the otologist should interpret his roentgenograms. I do not believe that he should depend on the roentgenologist. I look at them with a roentgenologist, and there are frequently times that he tells me something that I do not see. But I would rather use my own judgment on it.

Certainly the statement in regard to streptococcus mucosus capsulatus is correct. I have read with considerable interest that Dench had seen a number of patients, and had followed them over a considerable time, who had streptococcus mucosus capsulatus myelitis in which the drum membrane healed and the patient went on for nearly two years. But the next patient that I see who has a streptococcus mucosus capsulatus in his middle ear, I will either open his mastoid or he will get somebody else to take care of him.

The sclerosed mastoid shown on roentgenogram is not in itself an indication for operation, in my opinion. The sclerosed mastoid only is the same as a mastoid which is cleaned out by caries and healed. The point which is of value in a sclerosed mastoid is that high up in the tip you see some cells. Those patients will have a fistula, probably extending from those cells, and the operative indication comes when you find cells high up. Of course you cannot see the fistula through that sclerosed mastoid.

SIMPLE GLAUCOMA

ITS EARLY RECOGNITION AND TREATMENT*

ALBERT E. BULSON, JR.
FORT WAYNE, INDIANA

Simple glaucoma is so insidious in its onset and so devoid of striking symptoms that it often exists for some time without attracting serious attention on the part of the patient, and not infrequently is overlooked by the physician. The fact that the disease occurs most frequently at about the age when presbyopia sets in is in itself sufficient to cause the patient to believe that all he needs is a pair of glasses to correct the trouble, and he consults an optician or traveling spectacle vender with the natural result that his trouble is undetected. However, the optician and patient may not be the only ones at fault, for the careless examiner who poses as an ophthalmologist may overlook some of the significant manifestations because central vision remains good, and be content with a prescription for glasses for the unfortunate patient when in reality appropriate local treatment should be instituted to retard the progress of the disease.

As a matter of fact, while simple glaucoma is essentially a disease of middle life, it may also occur in comparatively young adults. A case occurring in a patient under thirty years of age, and at present under my care, is an instance. It is, therefore, of the utmost importance to be on the lookout for the disease when making a routine examination of any patient, and especially those who are supposed to be in need of glasses only in order to obtain the desired relief.

Probably every physician who does eye work is familiar with all of the cardinal symptoms and manifestations of simple glaucoma, though we know from actual experience that not a few cases of well-marked simple glaucoma, possessing good central vision, have been entirely overlooked by even some physicians who pretend to be eye specialists. This blunder not infrequently is due to the inexcusable habit of taking case histories carelessly, and either neglecting to make an ophthalmoscopic examination or making such examination in a very hurried and superficial manner. In consequence the contraction of the field of vision, the beginning disc cupping, and the increased intraocular tension escapes the examiner altogether.

It is, therefore, unfortunate, so far as the patient's condition is concerned and the probability of having the disease promptly recognized, that there is an absence of any marked external symptoms and no inflammatory attacks and no pain. The disease begins so gradually and progresses so slowly, though nevertheless certainly, that the patient—unless he be unusually solicitous about his own welfare—is very apt to fail to seek medical help. He may have had some prodromal symptoms such as attacks of foggy vision or halos about lights which he attributes to indigestion or fatigue, though as a general thing the disease has continued for some time or until he notices a distinct lessening of his accommodation and with it impaired vision before he finally seeks relief. The careless examiner who gives his patient but superficial attention, finding the central vision normal or nearly normal with correcting lenses, contents himself with a prescription for glasses, and the patient is afforded temporary relief through the increase in the acuity of his vision, only to discover a little later that something more must be done in order to improve the rapidly failing vision.

My purpose in discussing this subject is to emphasize the importance of recognizing this insidious disease at a very early date in the hope that not only may the ravages of the disease be checked and inevitable blindness be prevented, but that useful vision may be retained for many years. However, if simple glaucoma is recognized as promptly and as often as it should be, it will be necessary for medical men to be a little more thorough in their methods of examination.

The diagnosis of simple glaucoma is made by noting the contraction of the field of vision, the increase of intraocular tension, and the picture presented when the ophthalmoscope is used. Contraction of the field of vision perhaps may have been noted by the patient, and in a well developed case of simple glaucoma the patient may remark about the "gun barrel" vision or difficulty in seeing anywhere but straight ahead. It may be detected by the examiner in a crude way by hand movements while the patient directs his vision straight ahead, but more accurately by the use of the perimeter. A shallow anterior chamber, such as seen in other types of glaucoma, rarely if ever exists. Usually the pupil is a trifle larger than normal and is inclined to be a little sluggish, though it acts to light and accommodation.

So far as tension is concerned, that in this day and age is a matter for the detection of which the tonometer is required if we are to make early diagnoses. While it is true that in well-marked cases of glaucoma increased tension may be detected by palpation, yet in the incipient cases palpation is next to useless and the accurate tonometer must be relied upon. The instrument should be used oftener, and always in suspicious cases. In fact the examiner many times will be surprised to note an increased tension in cases having suspicious

*Read before the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association at the South Bend session, September, 1920.

symptoms, and later find that the tonometer pointed unerringly to the onset of a glaucomatous process. I personally am convinced that a persistent tension around 25 should be looked upon with suspicion, and a persistent tension of above 25 should be considered as diagnostic of a beginning glaucomatous process.

The contraction of the field of vision and the moderately increased intraocular tension usually antedates the appearance of any very marked changes that may be detected by the ophthalmoscope. However, if the physician will make a critical examination of his eye cases he will be surprised with what frequency he can detect the early cupping of the disc, even though this manifestation indicates that the disease has existed a certain length of time. The well-marked disc cupping is recognized by even the most cursory examination, and it would be nothing short of a criminal blunder for an eye specialist to overlook it.

One of the most significant manifestations is the partially dilated pupil, even though active, in a patient past middle age, but I have known that manifestation, even when coupled with a marked increase of tension as indicated by the tonometer, to be entirely overlooked by some supposedly good eye specialists, and all because the central vision was normal or nearly normal. I even have heard some eye specialists say that they hardly consider it necessary to make an ophthalmoscopic examination in refraction cases, which to my way of thinking spells as much negligence in giving proper attention to cases as to fail to do a retinoscopy. The good eye specialist and the one who comes nearest to being a success in his specialty is thorough and painstaking in all his work. He cannot be considered as doing himself or his patient justice if he overlooks the importance of using the ophthalmoscope, the retinoscope, and the tonometer in the majority of cases in which the question of vision is concerned.

So far as the treatment of simple glaucoma is concerned, I am a firm believer in the early use of miotics in the weakest strengths sufficient to keep the pupils moderately contracted. No set rule can be formulated concerning the strength of solution to be used, as every case is a law unto itself. Pilocarpin, being less irritating, is preferable, and ordinarily in the strength of one-half grain to an ounce is strong enough in the early manifestations of simple glaucoma, though this strength will have to be increased from time to time in order to hold the disease in check. It may even be advisable to switch off to weak solutions of eserin occasionally, and in my experience the latter drug is best prescribed in an olive oil menstruum.

Too much stress cannot be laid upon the importance of regulating the diets and habits of the patient. Fatigue, worry and excitement all have a tendency to aggravate glaucomatous symptoms, and the same is true of injudicious diet and failure to secure proper elimination from skin, kidneys and bowels.

In the event that the disease progresses rapidly in spite of miotic and constitutional treatment, the advisability of instituting operative treatment should be considered. Of the various operations that have been recommended I am personally partial to the Elliott trephine operation or a modification of it in order to secure a filtering cicatrix.

Finally, the patient as well as the physician should remember that simple glaucoma means a life job for the patient, and the case should be considered accordingly.

DISCUSSION

DR. B. J. LARKINS: In making the ophthalmoscopic examination we should be particularly interested in the examination of the temporal edge of the disc and the parallactic displacements. Sometimes by this method we can determine that we have a slight cupping in the temporal side of the disc, which will not help us in our diagnosis but will enable us to warn the patient to return for further observation and then we can use the tonometer or perimeter.

Where there is a suspicious cupping of the disc on the temporal side, without any curving of the vessels to speak of, if you use four percent cocaine, one drop in the eye and keep the eye closed; then in five minutes use another drop, you will find that you have fairly good mydriasis.

One point that I wish to emphasize is that we should make a perimetric examination as well as more careful ophthalmoscopic examination. As Dr. Bulson says, glaucoma arises so insidiously that it is often overlooked.

As for the treatment, miotics should be used at first, but I would use a little stronger solution of pilocarpin than Dr. Bulson suggested. If we start with one-half percent and then increase it as we find the case demands, that is a safe course, using your judgment in the matter.

As for the operation of choice, I believe with Dr. Bulson that the Elliott corneal-scleral trephine is the operation of choice in chronic simple glaucoma. They speak of the late infection, but I think we should take the chance. Only recently we had a case where double iridectomy had been done years before for chronic simple glaucoma. In that case the man's right eye was totally blind and his left eye practically blind. As a last resort we did a corneal-scleral trephine on his left eye first. The tension remained down, and he has serviceable vision.

We did not improve his vision, but if we can hold the vision he has we are doing the man some good.

DR. GEORGE W. SPOHN (Elkhart): I enjoyed this paper, as I always enjoy papers on this subject. I believe if this section could have a paper upon this subject read before the general practitioners in every one of the 92 counties in the state of Indiana every year, that in five years we would have fewer cases of glaucoma.

DR. BULSON (closing): My object in discussing the subject of simple glaucoma is to call attention to the fact that the disease is so often overlooked as a direct result of ignorance of the early manifestations of the disease, or carelessness in making the examinations. Perhaps I should say that in reality the paper is a plea for more care and more thoroughness in making eye examinations, whether the patient consults the physician for the adjustment of glasses or for any other reason. No examination can be considered complete without the painstaking use of the ophthalmoscope. Aside from this the field of vision and tonometric findings should be secured if there is the slightest suspicion of glaucomatous symptoms. Finally, the physician and the patient should understand that the treatment of simple glaucoma means a life-long job if the disease is to be held in check. Spasmodic efforts at proper treatment will not suffice. The patient has one more daily duty to perform, and that is using miotics and giving suitable attention to elimination and such suggestions as a competent physician may give concerning the management of these cases.

THE SOFT PARTS

A FACTOR IN OBSTETRICS*

DR. H. D. FAIR, MUNCIE, IND.

Even in this modern day, the year of our Lord 1920, every gynecologist, who so often is a follow-up man to the obstetrician, every week sees many women who belong to one of three groups: (1) Those who have some unrepaired injury due to parturition; (2) those who were injured and the repair improperly made; or (3) those who were damaged and the repair made intelligently by an honest practitioner, yet the results are not satisfactory. This condition of affairs indicates that some of us are neglecting the interests of our patients in one way or another. The purpose of this paper is to attract the attention of the practitioner who has never considered first or second degree injuries to the birth canal so seriously as he ought; and attempt to stimulate him to do better and more thorough work.

*Read before the Medical Section of the Indiana State Medical Association at the South Bend session, September, 1920.

In my paper, "Better Obstetrics," read before this assembly a few years ago, I made this assertion: "Other things being equal, a young woman ought to be healthier and happier after the birth of her first baby than before." Can the majority of our puerperal convalescents be thus classified? If not, why not?

When nature designed the structure of the female pelvic floor provision was made for the accomplishment of a feat which is never demanded nor expected in the male, viz., parturition; therefore we find the former has a cleft, through which extends the vagina which during parturition is greatly distended. In spite of this anatomical break in its continuity, a woman has the same abdominal viscera resting on her pelvic floor as does the male, and it is subjected to the same strain from intra-abdominal pressure. Thus is demonstrated one of nature's marvels,—that this floor is so constructed that parturition is possible, leaving it firm enough to perform the functions common to both sexes, and under normal conditions, do it equally well.

The study of this structure is a lesson in architecture, and shows what a wise and provident builder our Creator is. An inspection shows that the pelvic floor is made up of the bladder, vaginal walls, connective tissue, rectum and peritoneum, and stretches from the symphysis pubis to the sacrum. We notice that the vagina cuts the floor, not perpendicular to the horizon, but obliquely at an angle of about 60 degrees. When its walls are in apposition, as they normally should be, the pelvic floor has an appearance of being unbroken, and under normal conditions the greater the intra-abdominal pressure the more firmly the anterior and posterior vaginal walls approximate and adhere to each other.

The pelvic floor is divided into two main segments, the pubic and the sacral. The former is loosely attached in front to the symphysis pubis: the bladder and urethra meeting each other at right angles are separated from the pubis by the pyramidal deposit of loose fat: the peritoneum passing from the anterior abdominal wall, just a little over the top of the symphysis, on to the fundus of the bladder.

The sacral segment is attached to the coccyx and lower sacrum, and consists of rectum, perineum and strong tendinous and muscular fibers. The inferior portion of this segment, the perineum, lies, according to text books, about one and one-half inches from the symphysis pubis, but I find this measurement is subject to marked variations, and as I will attempt to prove later, constitutes a very important factor in obstetrics. During labor this perineal body, which was previously a wedge shaped mass up to two inches in diameter, becomes flattened, its apex pressed down and back so that its structures come to lie on the distended pelvic diaphragm, now being a

thin semi-transparent membraneous structure. one-eighth to one-fourth inch in thickness. The rectum lies to the left and rear of the pelvis and does not occlude the cavity unless containing fecal matter. The nerves are protected by the spines of the ischia and the forward dip of the pelvic floor. The sphincter ani lies between the skin and pelvic diaphragm, and is connected posteriorly to the coccyx by a ligament. The spinchter ani varies greatly in size in different women, and gapes widely in each diameter as the head descends low, thereby exposing the anterior wall of the rectum.

The pubic segment is also attached laterally to the anterior bony pelvic wall; the sacral segment likewise to the posterior bony pelvis: these two segments blending or fusing into each other on the right and left sides of the vagina, and above and below in what may be called a median raphe; this portion being least vascular and sensitive. There is an anatomical contrast in the structure of these two segments, the pubic being made up of loose tissue and is loosely attached to the symphysis pubis, while the sacral consists of dense, strong tissue and is firmly dove-tailed into the sacrum and coccyx. During labor the pubic segment is drawn up and the sacral segment is drawn down. This action has been likened to that of folding doors, as one passes through pulling one to him while pushing the other away. In other respects its similarity to the action of the iris diaphragm on our microscopes is just as evident.

From and because of the particular arrangement of the pelvic floor we find a definite opening up only during parturition, or when a woman assumes the knee-chest position with the vaginal orifice up, or in connection with hypertrophic changes in the cervix or adjacent tissues.

It is more nearly correct to speak of the separation of the two segments than of the vaginal wall being apart, for the vaginal walls are not special structures but are analogous to the edges of the two folding doors. The retropubic fat and the peritoneum over the bladder is movable, while the peritoneum over the sacral segment is fixed.

The projectability of the pelvic floor is about one inch. The distance from the coccyx to the fourchet in a pregnant woman averages two and one-fourth inches, and during the acme of expulsion this dimension is increased to five or more inches.

The structures most frequently damaged during delivery are the lavator ani muscle and the fascia covering its upper and lower surfaces. Rarely the coccygeus is torn. Another set of muscles of little significance in labor is the transverse perinei, but following even a slight laceration they play the mischief by tending to keep the edges of the wound separated when the rent goes unrepaired.

A few years ago I awakened to the fact that I was getting an occasional tear when the size of the fetal head, age of the mother and conditions in general apparently did not warrant such an accident. On the other hand, in some cases where I fully expected considerable trauma the patient remained uninjured. Finally an anatomical peculiarity in one of my patients led me to undertake a series of investigations. With the help of my regular assistant I measured the distance from the inferior edge of the symphysis pubis to the fourchet and on to the anus in one hundred nuliparous patients who came to the office for treatment. By an ingenious device this was accomplished while the patient was being treated, and without her knowledge. To my great astonishment our record shows that this measurement varied so much as one and three-fourths inches. Just consider, for a moment, what a factor this is in obstetrics. The head must pass under the pubic arch and over the fourchet, and it makes a significant difference whether the original distance between the two points is three inches or only one and one-fourth inches. It is self evident that a vulva attached high on the pubis is subject to severe parturiental trauma while with the opposite anatomical formation a head twice the circumference may pass without laceration. With this fact before us we ought to be able to anticipate and estimate, in nearly every instance, just how much damage we may expect. I always anticipate a tear of the perineum when the anus and particularly the area posterior to the anus bulges before the vulva begins to gape.

The word "damage" naturally suggests repair, and I have a few words I wish to say regarding methods and results. On several occasions, after doing what I considered a good job, I failed to get union by first intention, and in some instances the patient received no benefit from my attempt. One of my friends, when discussing the matter, said that he always succeeded in getting good results, so I concluded that something was wrong with me or my technique, and I set about to discover what it was, and my findings are here presented.

In the first place, my idea of the structural arrangement of the fascia, muscles and their attachments that go to make up the pelvic floor was vague and incomprehensive. I, together with many others, as I have since learned, thought all damage was apparent, and that a stitch or more conducing to a fairly cosmetic result constituted essential repair work. I paid but little attention to trauma occurring anywhere except in the median line. In the second place, I discovered I was not using the proper material for sutures. My stitches did not hold

long enough to insure safe union. I did not recognize the importance of this little transverse muscle previously mentioned. In the third place I was using too elaborate dressings and meddlesome after care.

Today I am getting much better results. I try to repair damage wherever along the parturient canal that damage may occur. I try to suture muscle, fascia, skin and mucous membrane in their proper order and relation to each other. I use at least a ten day cat gut, preferring small sizes which demand less effort on the part of the tissues to accomplish its absorption or disposal. When a crown or retention suture is needed I use silk worm gut, leaving the ends long. I apply no dressing whatever following either a primary or a secondary perineorrhaphy. The perineum is not washed nor cleaned with a cloth nor sponge but is irrigated by a spray poured from a pitcher or irrigating can.

In the fourth place, I had been drawing my sutures too tightly. This not only interfered unduly with circulation of blood into and through the tissues but added to the discomfort of the patient. Coaptation without constriction is sufficient. We must also bear in mind that the tension on the perineum while the patient is in the lithotomy position differs materially from that when the legs are extended.

I formerly considered the secondary repair a more difficult operation than that of primary suture, but now I know it takes more skill and patience to properly care for the immediate needs of a damaged parturient canal, and to put the patient in a condition where she may become practically good as new.

Even the careful surgeon using the best skill at his command, confident in his materials and methods, may have unsatisfactory results, for many things can happen to modify the effects of his work and counteract the ends expected to follow his faultless technique; for these things he may be in no way responsible nor have any knowledge of their existence.

Suppose we are in attendance upon a primigravida at full term with a fetus weighing eight pounds or more, and we are able to recognize the fact that the vulva is attached high over the pubis, that a tear is imminent and that the usual methods of attempting to protect the perineum will be useless (I use the word "attempting" advisedly, for in a given case corresponding to the above, all efforts toward preserving the integrity of the perineum are attempts only; they never succeed), what is the reasonable thing to do? Episiotomy, is the answer. A difference of opinion exists regarding the technique and the line of incision, but as the median raphe is the point usually selected by nature for enlargement of the vulvar orifice, and as it is the least sensitive and vascular area, it seems to me that less damage is likely to be done with a median incision than by any other. Repair is certainly easier and results, in my experience, have been more satisfactory than when the lateral and slanting incision was used. As to the advantages of a clean cut straight wound over a ragged tear with numerous ramifications, there is no room for argument.

For the purpose of this paper the uterine cervix is included in the "Soft Parts". I firmly believe that many deaths from post partum hemorrhage have occurred when the blood did not come from the placental site. Twice during the last year I was called to assist in stopping post partum hemorrhage where the trouble was purely cervical, yet in neither instance was the attending accoucheur aware of the fact. In one instance the patient was nearly exsanguinated and would have died in a few minutes. So soon as I had fixed both edges of the torn cervix within the grasp of a vulsellum the hemorrhage immediately ceased. One of these physicians who had been doing obstetrics for thirty years had never taken a stitch in a cervix, and had no suture material with him.

I believe every physician doing obstetrics should be capable of doing the necessary repair on the cervix and have the materials on hand ready for prompt action.

DISCUSSION

DR. F. R. CLAPP (South Bend): I do not know of any subject in obstetrics which is so important, and the ultimate results so far reaching, as the subject Dr. Fair has elected to present. If we are to accept the statement of Williams, that 40 percent of all women who go through childbirth are, to a greater or less extent, rendered physically deficient, I do not know that we can take up and discuss a subject that ought to bear more fruit than this particular one. I wish to congratulate the doctor upon the way he has presented the subject. It is very largely a subject of anatomical conditions and the process of labor. I believe that we have had heretofore a very vague idea of what occurs to the soft parts or the physiology. We have taken into consideration very lightly all those things that go into what we call the mechanism of labor. If we will consider for a moment the pressure exerted on the pelvic floor during labor it will be easy to imagine how all degrees of trauma may result. I believe that many of the most frequent injuries to the soft parts are unrecognized. It is not necessary for a patient to have an apparent laceration, one that we can see, on account of the dilatability of the vagina and the non-dilatability of the tissues that constitute the pelvic floor. We do, very frequently, have rupture of these non-dilatable structures, and these injuries are only recognizable late, during the post-partum period.

We are unable to see them at the time rupture occurs and it is only after the period of involution is completed that they are recognized.

I wish to call your attention to the fact that those men who are doing obstetrics should make a routine examination of their patients six weeks post-partum, and make not only a vaginal examination, but a rectal examination, which I consider more important. I do not believe we are able to determine anything very definite by a vaginal examination alone. In the cases where the pelvic floor has been injured, with the finger in the rectum it is easy to turn the vagina inside out and so reveal any injury. In the lithotomy position those structures which produce a sphincter-like action of the vagina tissues permit gaping when lacerated. The woman whose pelvic floor integrity has been maintained will have a perfectly closed vagina when she is in the lithotomy position. These things can be determined by a glance. I think we will find in more cases than not, in 50 percent at least of the cases that have suffered birth injury, that repair has been incomplete or imperfect.

The doctor very lightly touched upon the subject of episiotomy. It has been my custom in the last two years to do a routine episiotomy in all primiparas. With that method and with prompt repair afterward we can make those women what I term "re-primiparized". We can put them in the same condition as before delivery. I disagree with the doctor in regard to the method of episiotomy he used. He makes a central incision but I very much prefer a lateral and a wide one at that—large enough to take care of the oncoming head. The size of the wound makes very little difference, no more than the abdominal wound in a laparotomy. The method of closing this wound is also important, and I have tried to find a method which is serviceable for all cases. I have used interrupted and continuous catgut, silkworm gut on the skin surface, with silkworm gut as anchor sutures, until I have arrived at the conclusion that we must treat the episiotomy wound just as any other surgical wound, and this it is. It is the same as any wound in the abdomen and should be treated in the same manner. My method of closure is now just the same as in a laparotomy wound, using an interrupted suture to bring the muscle into apposition, an interrupted plain catgut, then the fascia is closed by a ten day chromic gut, anchor sutures are placed, and for the skin I use the skin clips. This method has served me better than any other and I think I have tried them all.

The doctor spoke of only the incomplete repair of the primary process. I think this is due to the fact that we do not take into consideration the anatomic structures we are dealing with. These tissues must be brought together according to their anatomical structure, the muscle edge to edge, and fascia to fascia, just the same as any other wound in any other complex tissue.

I think the great majority of men who are doing obstetrics do so because they are compelled to do so rather than from choice. The sooner obstetrics are taken seriously the sooner we are going to get results. Men are going to take this work up as a specialty and it certainly deserves it. Our women, the mothers of us and the mothers of our children, have not received the attention they deserve, and our daughters who are coming on to be the mothers of our next generation will receive much better attention during their childbearing times than those who have gone before them.

DR. A. M. MENDENHALL (Indianapolis): In entering into the discussion, simply because Dr. Clapp spoke of 40 percent of the women being injured, I would say that Dr. Polak says that 90 percent of all full term primiparous labors results in damage to the perineum. He goes further and says that some 10 percent cannot be repaired at that time as there is no open wound. Therefore, an episiotomy is the thing in the 90 percent. He finds an occasional primiparous labor in which he feels that the vagina will permit the passage of a full term child, but he advises and is routinely doing the episiotomy for the full term primiparous labor. If you have a small baby, this statement will not apply. The feeling is, by Dr. Polak and others, that they can make a better repair by episiotomy than with a lacerated perineum. With this astonishing fact presented to us it is perfectly obvious that this matter deserves a good deal of attention, and Dr. Fair is to be congratulated for bringing up this subject, old as it is, for our discussion.

The cervix is one of the most serious obstacles we have to deal with in many labors. We can meet contracted pelves by many different methods, but in many cases a cervix will not properly admit forceps or version and no man doing conservative obstetrics wants to do a Cæsarean section for a rigid cervix. However, you will find occasionally a cervix which will not dilate; you try to dilate it manually, put in a finger and dilate it up to three or four fingers, but find a heavy ring of cervix still remaining. I think the cervix should be included in a discussion of this kind as one of the important parts.

Dr. Fair brought out the question of unobserved lacerations, or damage which cannot be seen. Unquestionably a great deal of damage is done that could be seen if it was looked for. If a proper speculum is put in and the patient

placed in the proper position a great many of these injuries will be seen, but many cannot be found even with a speculum. In other words, there is separation of the muscle fibers without any damage to the mucosa, or any damage to the skin, which falls right in line with Dr. Clapp's discussion of episiotomy.

The choice of the episiotomy I would not like to discuss at this time because there is not sufficient time to enter into it, but the facts are that the obstetrical profession is about equally divided as to central and lateral. Personally I prefer the central, probably because I have performed thirty-five or forty central episiotomies and only about seven or eight lateral. I believe that episiotomy is not being done nearly often enough, and I am glad to have the opportunity of discussing it.

I also congratulate Dr. Fair on his statement that it is much easier to do a secondary perineorrhaphy than an immediate repair. Many more men can do a nice, clean perineorrhaphy than an immediate surgical method. The primary perineorrhaphy has to be a repair of the damage done, whatever that is. You cannot say you are going to do a Mayo or any other special method, but you are going to repair the damage done. The coaptation is the thing, and I like to use absorbable catgut in my perineorrhaphy. I think no man will get a good perineorrhaphy by putting a through and through suture of the skin, muscle and all. He should coapt the muscle and repair the skin afterward; the muscles must be coapted in a deep wound, and we can later close the skin. I think the perineorrhaphy done in three layers is better than to do it all at once and have an apparently perfect perineorrhaphy, but in reality a very poor one.

DR. H. D. FAIR, Muncie (closing): I would like to say a word or two more regarding the incision. Last Spring I spent some time at the Chicago Lying-In Hospital with Dr. DeLee and his assistants, and I asked them why they did not do the central instead of the lateral episiotomy. Their answer was this: if you make a central incision and there is a greater tear, it will go on down and perhaps through the sphincter ani; if you have a lateral incision it will go off in a lateral direction and do no harm. One of the men who was doing much of the operative procedure had not done a central. Most of the men who are objecting to the central incision do so because they have never used it and they are objecting on theoretical grounds. If you use it I feel certain you will like it.

OBSTETRICS IN GENERAL PRACTICE*

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It is a quite generally accepted fact that obstetrics as practiced in connection with general medicine is very often not only unsatisfactory as to results obtained but quite frequently fails to satisfy even the man who is practicing it. In other words, more and more general practitioners are coming to realize that to practice obstetric case and get better results, and in turn for the time they are able to give and with the compensation they are able to demand. With these physicians there are but two alternatives —either give more time and care to each obstetric case and get better results and in turn for such service demand adequate compensation, or give up obstetrics entirely. To adopt the latter alternative would be deplorable, as a large number of physicians who are practicing the better obstetrics would simply be dropping a service they owe to the community, thereby leaving their clientele to the mercies of more inferior men. Rather to be preferred is that those general practitioners who know that obstetrics should be elevated to a higher plane (and there are many who feel it) should never tire in their efforts to bring about a more universal feeling among the laity as well as the profession that pregnancy, labor and puerperal conditions are deserving of far more consideration than they generally receive, and that just as soon as these facts become more perfectly realized just that soon will there begin a marked reduction in the morbidity and mortality connected with the child bearing process. And along with this will come the realization by the laity of the truth of the old adage, so well established with obstetricians, that the patient who pays the smallest obstetric fee is usually cheated the worst.

There is no longer any reason why the man who is trained in anatomy, physiology and general medicine and surgery should consider and handle a case of obstetrics as though it were a normal and physiological process that needs but little or no care. There are 15,000 or more deaths in the United States every year due to obstetrics. Eighty to ninety percent of these deaths are preventable. Tuberculosis alone kills more women of the child bearing age. What woman may have been in her early days of evolution, and what the childbearing process may have been in the early days of the race, need not enter into this discussion, for we do know that leading obstetricians the world over (notably DeLee, of Chicago, and Polak, of Brooklyn) are continually trying to establish the fact that the average pregnancy and labor

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are distinctly pathological. If we need further evidence that it is not considered pathological let us offer a pregnant woman to some of our leading insurance companies for life insurance.

Accepting the fact that if not always pathological it is at least fatally so in 15,000 of our women yearly, would it not be well to consider a little more seriously that any pregnancy, labor or puerperium may at any time become distinctly abnormal? With this in view there should first of all be greater effort made to get the pregnant woman to engage her physician earlier. It is by no means difficult for any individual physician soon to get the fact widely disseminated among his clientele that he desires an early engagement for all his obstetric cases. Then he makes his general physical examination, blood pressure and urinalysis with sufficient care at least to detect gross abnormalities of the lungs, heart or kidneys. Periodic examinations of the urine as to specific gravity and albumin, and occasionally for sugar, ought to be routine practice. Too much dependence must not be placed upon urinalysis. Women may and do go into eclamptic convulsions with their urine normal or practically so. Therefore, the practice of having the urine sent to the office is not to be commended.

It is far better to see the patient in regard to edema, headache and other symptoms, but most of all for the purpose of taking her blood pressure. Practically always a grave toxemia is anticipated by a steadily rising blood pressure. A fairly high pressure often is less alarming than a lower one but one which has been steadily rising. Hence with the combination of urinalysis and blood pressure takings we will very rarely, if ever, be called unexpectedly to see our patients in convulsions. And what is better still we will have anticipated this calamity and in most cases be able to prevent it.

Most of our recent graduates in medicine start out thoroughly impressed with these facts but soon begin to neglect them, the reason often being that they may conscientiously carry out this practice on a comparatively large series of cases and never find a case of albuminuria and casts nor high blood pressure, and therefore they decide it is too rare to be worth the effort. But the point we wish to establish is that we should always be looking for this rare occurrence if we choose to call it rare. If we carefully follow up 99 cases before we find an approaching eclampsia, and our hundredth case is of this type, and we have discovered her while our chances of saving her life are about 98 percent instead of after her convulsions start, and she is in a 25 percent mortality class, haven't we been repaid for our efforts on the other 99? And this is leaving out of consideration the increased chances of securing a living child. My last two cases of eclampsia were each excellent examples of improper prenatal care. In one instance the patient had failed to report to her physician for three weeks, during which time she was rapidly becoming edematous, having severe headache, vertigo, disturbed vision and insomnia. The other had not had her blood pressure taken at all, as her physician thought he could depend upon urinalysis alone.

Next to routine examination of the urine and the blood pressure readings probably should be mentioned pelvimetry. The writer is well aware of the many pelvic measurements that may be more or less accurately taken and that are of some value, and that it requires a little extra skill to make a very accurate and complete pelvic measurement. Nevertheless we do maintain that every man doing obstetrics should be able to measure accurately the external conjugate, which is much the most important external measurement in nearly all cases; and he should know that 20 or 20½ cm. is the average and that under 17 or 18 cm. he should at least be placed on his guard. There are other important external measurements but we wish here only to emphasize the external conjugate.

Then a most careful vaginal examination should be made prior to labor to determine gross abnormalities and to determine whether or not the promintory of the sacrum can be reached, and if so the length of the true conjugate. Having once decided we are dealing with a small pelvis we can much more wisely choose our future course of action. We will, at least, make fewer vaginal examinations after labor starts, and better preserve our patient for operative procedures if they become necessary.

And this leads to the question of vaginal examinations. Whether we can always get the desired information by rectal examinations, and, if not, when shall we make a vaginal examination need not be discussed here further than to say that far too many vaginal examinations are being made, and that very often even an abdominal examination is all that is indicated. Many men are very skilled and proficient in rectal examinations, and rarely make more than one if any vaginal examination after labor begins, and these men are of course reducing their infected cases down to very small numbers. The records of our large maternities go strongly to show that sepsis increases in proportion to the number of vaginal examinations made during labor.

It always should be borne in mind that a great deal of information may be obtained by abdominal examinations during labor, this being especially true of cephalic presentations. Very frequently in the slightly contracted pelvis, and of course always in the absolutely contracted pelvis, the head may be felt above the pubes, and

in all such cases we are quite sure delivery is not imminent; hence repeated vaginal examinations are not only quite needless but are especially contra-indicated because such a case must always be looked upon as much more likely to become a Cæsarean or other operative delivery. No harm can come from as frequent abdominal examinations as desired, and it often takes but a moment to palpate the fetal head still riding upon the inlet, and this should act as a danger signal toward further vaginal examinations, at least if one thorough one has been made previously. If we decide upon a vaginal examination during labor it may often give us a little information that may be quite difficult to obtain by rectal or abdominal examinations. Usually the rectal examination will tell us the degree of dilatation of the cervix, but in a few instances we may not be entirely satisfied upon this point.

Likewise as to the membranes—we may or may not be able to determine whether they have ruptured, and if it is especially desirable to establish this fact, a vaginal examination may have to be made. Then finally one vaginal examination is often necessary for an accurate determination as to presentation and position. Granting the possible necessity for one vaginal examination, then to determine these important questions it is to be recommended that every effort be made to get further and subsequent information by suprapubic and rectal examinations, always seeking first for a real indication for further vaginal examinations.

It seems only necessary to mention in passing that every parturient woman is entitled to the additional safeguard which is bestowed upon her by the proper use of rubber gloves and very careful aseptic and antiseptic technique.

Back so long ago as 1843, long before we understood bacteriology and infections, our immortal poet and medical writer, Oliver Wendell Holmes, strongly warned against a physician jeopardizing the life and health of a woman "by traveling direct to her childbed from cases of puerperal sepsis, post mortems, erysipelas, etc., before he had practiced thorough ablution and allowed an interval of time to elapse." In his own terms this was "in the highest degree inexpedient". With all our modern knowledge of these subjects we are falling very far short of our duty whenever we fail in any manner to surround, as completely as possible, every parturient woman with our best safeguards against infection. We must contribute just as much as possible toward reducing the appalling number of 6,000 deaths annually due to puerperal sepsis.

Whether or not all obstetrics should be done in the hospitals and maternities, there seems no argument except to the effect that a very large number of women are not located where hospital facilities are available. The ordinary obstetric case should be considered as distinctly a surgical procedure, and in view of the fact that few surgeons any longer operate in the private homes, neither should a delivery be conducted there when hospital facilities are at all available, and in localities where they are not available we should lend our influence toward their establishment. There are many emergencies and accidents that may and frequently do happen during labor which can be far more safely handled in a hospital.

It does not seem profitable in the time allotted to me here to take up any of the complications in detail, but I desire to suggest just a few specific things, and the first is eclampsia treatment. Whether or not we belong to the enthusiastic supporters of the morphine treatment, the incontrovertible fact remains that a few large doses of morphine to the eclamptic patient being cared for in her home and by the general practitioner is the best possible single procedure to be undertaken. Also a great many patients who are fighting and resisting their first stage pains, and in addition have a cervix that is more or less rigid, are greatly helped by a hypodermic of morphine.

Pituitrin is a valuable oxytocic, but is being greatly abused not alone by the general practitioner but by a few obstetricians. Pituitrin cannot reduce the disproportions between the passage and the passenger. When the contractions are already strong and frequent, pituitrin is to be avoided. Except in very rare instances it should not be used until the cervix is dilated.

Lastly I would sound a word of warning against depending upon vaginal tampons controlling uterine hemorrhage, and especially if the hemorrhage be due to placenta prævia. Cervical packing supported by firm, careful vaginal packing is much more to be depended upon.

In conclusion let us accept two facts: first, that there is still ample opportunity for obstetrics to be practiced better by all of us, whether as a specialty or in connection with general practice; and, second, that at present and in the near future at least a large percentage of this work must of necessity be handled by the general practitioner who only has recourse to the obstetrician in the grossly abnormal cases. Accepting these two facts, it is to be recommended that obstetrics be given more serious consideration, and that an heroic effort be made not only to reduce our very unnecessarily large mortality but also to reduce the very much greater but less often mentioned morbidity figures.

THE ACUTE ABDOMEN*

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The high mortality rate in dealing with acute conditions of the abdomen should command our earnest consideration.

I believe it safe to say that the cardinal symptoms of acute abdominal crises are pain, tenderness and muscular rigidity; however, the surgeon should consider the *"facies presens"*, the nervous temperament of the patient, the color of the lips, the stability of the pupil, the tension of the pulse, the body temperature, the skin, whether sallow and cachectic or harsh, dry and wrinkled, whether it is bathed in clammy perspiration or pink and elastic. He should note the respiration, whether it is deep and laborious or shallow and jerky, or if it is of Cheyne-Stokes type. He should note the contour of the abdomen, whether symmetrically round and plump, scaphoid or much distended. If the patient has vomited he should note the character of the vomitus, whether bilious, bloody or stercorraceous. If the urine can be obtained he should ascertain if it is clear, cloudy, purulent or bloody. The feces should be examined and a differential blood count made if facilities are at hand. A syndrome gleaned from these symptoms should form a basis for active procedure.

Pain is a usual symptom in acute perforations of the gall bladder, anterior wall of the stomach, of the appendix or any portion of the intestinal tube unless it be from typhoid ulcer or from crushing wounds lacerating the gut or rupture of the viscera by heavy vehicles crossing the abdomen or from heavy blows or crushing accidents thereby desensitizing the nerve endings. In typhoid fever there is present a low grade of inflammation causing desensitization of the nerve endings or nerve trunks from toxemia or nerve block. The intestinal tube has been known to be entirely severed by a blow on the abdomen or by a vehicle passing over it, impinging the gut against the spine, followed by little or no pain. Referred pain occurs in the abdomen from acute pleurisy or ectopic rupture. Severe pain comes from gall stones passing through the common duct, renal calculus passing through the ureter, torsion of any segment of the gut or intussusception. Various types of pain prevail in these conditions. The sharp cutting or agonizing pain in biliary, renal or appendiceal colic, griping pain in intussusception or torsion of the bowel, and pain more or less of a sickening nature in stab wounds, penetrating wounds or gunshot wounds.

Tenderness is a more positive diagnostic symptom of the acute condition present. It is, however, misleading often because in general peritonitis the tenderness is diffused and not localized over the lesion. In ruptured ectopic gestation often the entire lower abdomen is tender, and the same may occur in ruptured appendix. The entire upper abdomen may present tenderness from cholecystitis, from perforation of the gall bladder or stomach, or from rupture of the liver or spleen. Tenderness of the right rectus in the superior quadrant directs our attention to the gall bladder, duodenum, lesser curvature of the stomach, pancreas, hernia through the foramen Winslow, lesions of the liver, ascending and transverse colon. If it be in the lower right quadrant intussusception, appendicitis, kinks from Jackson's membrane, adhesive bands about the cecum, renal calculus, torsion of the kidney, strangulated hernia and inflammations rising from the pelvis should be considered. Tenderness in the region of the umbilicus is found in umbilical herniæ, appendicitis, volvulus and in rare instances calculus formed in a patulus uracus.

The last condition once came under my observation. A young man twenty-three years old developed an induration and acute inflammation around the umbilicus, a slight purulent and watery discharge began. The tenderness and induration became as large as the palm of the hand. The patient was extremely nervous and prone to a good deal of abdominal giration. In one of his paroxysms he raised himself up quickly in bed and a stone the size and shape of a large mulberry burst from his navel and struck the foot of the bed in which he was lying.

Tenderness along the left rectus may be due to rupture of the spleen, ulcer of the stomach, acute pancreatitis, ulcer of the descending colon and sigmoid, volvulus of the sigmoid, renal calculus and acute inflammations arising from the pelvis. Either rectus may be tender and somewhat rigid from inflammation within itself or transmitted from the thorax over the thoracic nerves.

Rigidity or hyper-rigidity of the recti muscles is pathognomonic in all acute conditions of the abdomen. Its presence is nature's method to stay or splint the underlying injured or inflamed peritoneum.

Pain, tenderness and muscular rigidity means peritonitis and if it is localized operative interference is demanded. If it is general as in acute fulminating peritonitis I believe a sane, sound surgeon, characterized by Crile, can elect the incision which will save many lives that would be lost by delay. The masters of surgery who have large hospital facilities with well organized staffs are prone to become lax in their diagnostic acumen and are somewhat lost when

*Read before the Indiana State Medical Association at the South Bend session, September, 1920.

called to diagnose and operate in other surroundings than their own.

The axiom of W. J. Mayo to get in quick and get out quicker should be followed. An incision made over a ruptured appendix with acute general peritonitis cautiously lifting up the cecum and appendix and by ligation and removal, if done in a delicate, rapid manner, is sane, sound surgery. The peritoneum, both visceral and parietal, are usually dark red, highly inflamed, friable and easily traumatized. Rubber covered gauze packs should be used if any. Evisceration and exposure to the drying influences of the air or permitting the bowel to lie on the surface of the abdomen which has not been well cleaned of antiseptics used in sterilization is pernicious practice. A very soft rubber drain inserted and closure made will often turn the course of septic material from the abdomen and bring about a sudden localized condition that will establish convalescence at once. Too much is done oftener than too little. Conservatism should be the balance wheel in all radical operations.

Regulation as carried out by the Lankenau Hospital, complete anatomic and physiologic rest in the absence of reliable history or reasonably sure diagnosis would be good judgment to follow if patients were always confined in hospitals, but such is not the case, and we must do our best often in the most meagre surroundings. Thrice in my experience I have been called to open the abdomen when extreme catharsis had been the underlying cause or had aggravated the condition. One case, a robust farmer, thirty-five years old, had been to the country village on Saturday evening and had eaten a large amount of peanuts. In the later hours of the night he was seized with acute abdominal pain which continued until the family physician was called. A hypodermic injection of morphia one-fourth grain was administered followed by two compound cathartic pills. The next morning two more compound cathartic pills were given and 2 ounces of castor oil. Vomiting began and continued until eructation of dark brown matter having a fecal odor persistently kept up. High colonic flushings were then employed by the two physicians in attendance. Finally, when all these efforts to get the bowels open had failed, I was called at 2 p. m. on Tuesday to hurry relief. The history was obtained and *"facies presens"* considered. The face was pinched and the expression anxious; the sclera was dull and pupils unsteady; the pulse was intermittent and feeble; the abdomen was distended and rigid. On palpation a mass could be detected about 6 cm. to the right and slightly below the umbilicus which was easily movable to the extent of 4 or 5 cm. in all directions. The abdomen was opened through a right rectus incision six inches in length, 600 to 800 cc. of light amber colored fluid escaped and a mass of entangled coils of intestines presented. Numerous dark bluish spots could be seen on different coils of dark red bowel surface. The coils were adherent to each other in many places and separation was carried out with a great deal of difficulty, necessitating the tearing of the muscularity of one loop for a distance of about 2 cm. The rent was grasped by rubber covered bowel forceps which seemed to pinch into the friable thickened bowel to such an extent that they were released and the assistant attempted to grasp it with his gloved fingers until separation could be completed. The over distended bowel loops began to turn about to equalize the gas and contents within when suddenly a spurt came between the assistant's fingers and fully a pint of finely ground peanuts in a fluid medium flowed over the bowel and down into the peritoneal cavity. A gallon pitcher of hot saline solution was used to toilet the bowel and abdomen as best I could, being careful to allow the fluid to enter the spaces filled with debris only. At no time was the fluid agitated in the spaces filled with it, neither was the abdominal wall lifted to allow the fluid to enter spaces unsoiled. I consider such practice as usually bad but in this instance it was cautiously employed. Owing to the extent of gut involved with the dark bluish spots, probably two feet in extent, resection was deemed too hazardous. A double purse string suture of 40 day No. 1 cromic cat gut was passed around the perforation and edges tucked in, care being taken to see that the bowel current was not obstructed. The abdomen was then closed in the usual manner with a very soft rubber drain inserted in the lower angle of the wound. The patient left the table in good condition. Vomiting ceased and the next morning his condition still showed improvement. A moderate amount of light amber colored fluid came through the drain the following day. At the end of 48 hours all symptoms were favorable and the drain was removed. The following day a message came that the patient was delirious. He had been given beer and other dainties without my directions. Needless to say the temperature had risen; the pulse had again become irregular; death followed 24 hours later, which was 72 hours following the operation.

Another case was that of strangulated hernia reduced *en masse,* followed by catharsis, perforation of the ileum and general septic peritonitis. The perforation was repaired and a soft rubber drain inserted. Five days later a fecal fistula developed. The patient was aged and feeble and died at the end of 14 days.

Mrs. A. E. B. had passed her 12th week of gestation when she attempted to commit an abortion by drastic emmenagogues. When an

examination was made she had an immense appendiceal abscess in which the coils of the ileum were incarcerated. Drainage was instituted through a right rectus incision with complete recovery and normal delivery at the end of gestation period.

In conclusion, I believe that every acute abdomen that presents the cardinal symptoms set forth in this paper, *i. e.*, pain, tenderness and muscular rigidity, should be opened unless it is clear that they are referred or that they accompany a constitutional non-surgical condition, such as tabes dorsalis. The mortality rate is in direct proportion to the time between the beginning of the acute lesion and the time of operation. Untimely operations are usually made under stress of circumstances or when the moral courage of the surgeon is at low ebb.

The sixth sense, "horse sense" (Deaver), common sense should be our guide in what to do and how to do it.

DISCUSSION

DR. J. C. FLEMING (Elkhart): I am reminded of a very interesting case of acute abdomen I saw within the last week. A woman in the neighborhood of forty-five years of age was taken very suddenly on the street with intense abdominal pain. She was carried to a physician's office in partial shock and in great distress. A hypodermic of morphine was administered and she was sent home. She improved for a little while and then there was a recurrence of the pain and a spot was localized pretty well in the right side of the abdomen which the doctor concluded was appendicitis and operated. He realized when he removed the appendix that that was not the whole pathology, because the cecum appeared unusually pale and the blood vessels looked peculiar. He put in a drain and about four or five days later about ten inches of the cecum came out of the abdominal wound in a slough and about two-thirds of the ascending colon sloughed away. The patient undoubtedly had an embolism of the mesenteric artery. She then was in a condition where she was discharging the entire contents of the bowel into the abdomen, running a temperature of 105 degrees, with a pulse ranging from 120 to 130. They waited four or five days, but the patient continued to grow worse and when I saw her in consultation we thought there was no chance unless we could stop the fecal current from going into the abdomen, so we went into the median side of this large fecal fistula and dissected the ileum, anastomosed it onto the transverse colon, then closed the distal end of the ileum and also closed the end of the transverse colon; but the patient succumbed in about twelve to fifteen hours. But the interesting part of the case was the pathology, that is, the occurrence of the embolism in the mesenteric artery.

THE PHYSICIAN

SOME MEDICAL QUESTIONS WITH A MORAL BEARING*

BY FRANK B. WYNN
INDIANAPOLIS, INDIANA

With perhaps a majority of the medical profession, tradition, custom and conviction have led to an attitude of negation so far as moral advice to patients is concerned. There will always be those who in personal contact with patients, hesitate to discuss their moral delinquencies through charity and sympathetic tenderness for those who have erred. Recognizing the universal weakness of human kind they recoil at the thought of wounding sensitive feelings. They recognize always the possibility of mitigating circumstances, which might in part excuse the lapse. Their view that patients do not like to be preached to by a doctor is correct, in most instances. Bungling attempts to regulate the moral life of patients is very likely to make the physician *persona non grata*. Then there is the ultra-scientific group, following standards so high that they demur at dropping to the common level of giving moral advice. A few there will be who through fear of losing cases will ignore moral phases of instruction. The average practitioner is likely to say: "Let the minister perform these functions. Our duty is to heal the physical body."

The educational and sentimental tendencies of the age scotch this old doctrine of *laissez faire* concerning medico-moral questions. Modern progress no longer permits us to shut our eyes or stop our ears to the appeal of immoral facts, observed in the practice of medicine, when it lies within our power to correct them. True, frail human beings will suffer, fail and fall, leaving the fit to survive. The successful gardener finds it necessary to not alone destroy the pests which infest flower and fruit; he tills the soil, plucks out the contending weeds, fertilizes the weaker plants, supplies water when drought threatens—all to the end that a fruitful crop result. He calls to his aid every agency which protects, enriches and brings results. Is man less important than the vegetable kingdom? Should the gardener have a broader grasp of duty than the physician? We may lazily settle ourselves and coldly observe: "Let the unfit perish. They

*Fourteenth of the series of articles by Dr. Wynn appearing regularly in THE JOURNAL.

are not worth the saving." Such is the unsympathetic mandate of evolution. Not a few physicians succumb to its cold, benumbing influence upon them. Fortunately for mankind there are more who view life as a sacred spark, which must be kept aglow by every means in our power. This heroic spirit, true to the divine fire of life, looks upon man as a tripartite being —having a physical, mental and moral side. The purpose at this time is to discuss some of the moral phases of medical practice.

Of the medico-moral questions coming to the fore in our own day none has occupied a more conspicuous place than the venereal disease problem. Preventive medicine has dared to force the issue in the face of an opposing professional conservatism. The plan of attack has been to bombard the fortresses of professional secrecy concerning the social evil; to lay bare the horrifying facts and consequences of venereal disorders and syphilis. It was a tremendous shock to professional propriety but was necessary in order to gain the attention and cooperation of the ignorant, who are moved more by fear than persuasion. However successful such propaganda may have proved with the ignorant, amongst those of neurotic and hypersensitive make-up, the effect has often been to engraft a phobia. Here then growing out of the method of the day, is a high moral duty incumbent upon both public health workers and practitioners, to guard the neurotic from becoming a victim of his fears. Thoughtless words, inaccurate and incomplete methods of diagnostic procedure, may develop in him a psychosis harder to bear and more difficult to cure than syphilis itself.

Leading toward the venereal peril is, of course, the sex-impulse so often driving the individual to calamitous acts. It is Nature's way of insuring perpetuation of species—a sort of physiological storm which may strike the individual unawares, causing confusion and disorder in his power of self-control. Has medicine done its full part in the world in teaching people how to avoid or seek safety in these storms? This is a newer phase of preventive medicine to which more and more attention will be given. What stock raiser in these days of wonderful achievement in that field, will permit the miscellaneous mixing of immature male and female animals? He knows quite well the result will be undue sex-stimulation, the stunting of both sexes, early failure of procreative and breeding power, and in the offspring a less perfect animal. All this we know, but in the case of human kind we not only ignore the facts but go contrary to their teaching.

In illustration note the social customs of the age. The fashionable mother in urban life forces upon her children a premature consideration of sex questions. Children are sent to dancing school and parties presumably to learn grace in movement, and the courtesies and formalities of conduct in so-called good society. In reality, the chief experience gained is a byproduct—the awakening of the sex impulses before the best interests of the body, mind and spirit warrant their aggressive and dominating activity.

Historical review tells us of the austerity of the Puritans and the severity of the Methodists and other sects in the separation of the sexes. There were the schools for boys and the schools for girls; and the sexes were separated in the churches. Feminine modesty and reserve was the subject of poetic exaltation. How changed is all this! Custom and fashion now permit free mingling of the sexes in church, school and social life. Instead of the austere and repressive measures of the olden days, all forces seem at work to stimulate social contact of the sexes irrespective of age. From sex-separation and severity the pendulum has swung to the opposite extreme of sex-worship. The flower of sex-modesty which flourished in former days has been wilted in our own day by the consuming flame of sex-passion. A morbid public appetite has been created which demands for its satisfaction sensuous demonstrations. The motion picture and playhouse present salacious climaxes with most realistic effect. Thus are children and youth inducted into dangerous fields—their sex-inquisitiveness aroused and their imaginations fired by pictures which lead them into evil paths.

In high schools and co-educational colleges it is considered quite the thing for every boy to have a girl. The familiarities of social relationship are rather shocking to proprieties as viewed by the older generations. Despite institutional influence, scandals are alarmingly frequent. In a very well known high school the prevalence of venereal disease amongst the personnel of the student body became so general as to arouse medical comment and agitation.

The larger entry of women into the business world, despite its justification, has dulled the sensitive edge of feminine modesty. This is manifest in both dress and manners. Feminine attire has become so scanty above and so short below that modesty has little remaining to hide. All this may be witnessed at any function of the "smart set". Or a visit to the popular bathing beaches soon convinces one that the indecencies of the old Roman baths are in danger of being repeated in our own time.

And in the matter of sex manners prevailing fashions are just as shocking as in dress. Within a fortnight I journeyed by boat up the beautiful Hudson. Aboard were several hundred excursionists—nearly all young people. Almost without exception, the young gallants were lounging in varying attitudes of embrace and endearment of their sweethearts. I flattered the *morale* of

my native State by saying: "This may go unrebuked in New York but not in Indiana." Only a week later my pride in Hoosier sex-behavior took a fall. Upon a public holiday I rowed a boat for several miles along White River near my native city. There were literally thousands of young men and young women, resting in canoes along the shady border of the stream, or lounging upon the banks, spooning unabashed—in attitudes which a generation or two ago would have classified a girl doing such things with public prostitutes.

These illustrations are given to show that a wave of sex-laxness is sweeping the country. The gradual removal of the old restraints, of religion, parental control, education, social customs, business relationships, have prepared the soil for the growth of noxious sex-weeds. There is an alarming drift toward the Parisian standard of morals. The lascivious presentations of the stage and motion picture are being enacted into the daily lives of youth quite generally—without blush of shame. This constant parading of sex problems before the public eye is making the race weaker, morally, mentally and physically. It is digging deep the slough of the venereal peril, from which flow the interminable streams of disease, suffering and degeneracy.

What should be the attitude of the profession toward these sex problems? Shall we be content to deal merely with the end results as found in venereal disease, and by alarmist propaganda seek to frighten the ignorant from illicit sex conduct? Would it not be wise in addition to these things, to instruct parents, children and youth in the physiologic doctrines which will show them how to become stronger morally and physically? Train them how to keep sex-impulses in subjection and remain safely upon the path of virtue. To most persons this will be a thankless and fruitless task for the ignorant and willful will go their way. Over the thoughtful and intelligent the physician should be able to exercise a wise restraining influence. First his voice should be raised in constant and vigorous protest, private and public, against the pernicious social and recreational customs which tend to stimulate harmful sex-impulses in the young. Instead of the salacious plays and movies he will urge those of wholesome moral tone; spicy it may be with clean humor, entertaining in art or literature, uplifting in ideals, instructive in nature-study, science and travel. He will counsel against the reading of lascivious literature. He will urge participation in manly sports and open-air recreations such as tennis, golf, hiking, gardening, nature-study and the like. The present generation has seen the development of some remarkable organizations which through these outdoor recreations and participation in athletics seek to make youth fitter—physically, mentally and morally. Such are the athletic and physical training departments of schools and colleges; the Y. M. C. A. and similar organizations; and especially worthy of commendation the boy-scout movement.

Sensuality and sex erraticism thrive upon idleness. A cardinal principle in the maintenance of sex virtue, imaginatively as well as literally, is first of all to have the mind deeply intent upon the pursuit of other topics. Sex-stability is still more likely to be maintained if the individual adds to absorbing mental occupation physical activity. Whilst most important in the furtherance of sex purity that each have a job to which one's best efforts are given, it is equally important that there should be periods of recreation, which should be wholesome from the mental, moral and physical standpoints. It is just as much a part of a physician's business to point out these physiologic truths, the application of which protects against sensuous wanderings, as it is to advise against exposure to infection, alcoholic excesses, diatetic abuses, ennervating s o c i a l indulgences, or business stresses. One of the growing obligations of the newer medicine is that we should devote more attention to the physiologic facts of life, in relation to the cause and relief of disease. During the past four decades pathology has held the stage of professional thought and action. Now physiology must come more to the front—in both private practice and public health work.

In the field of physiological instruction it should be our pleasure and duty more and more, to instruct especially children and youth on how properly to evaluate their capacities and traits in order that their lives may fall in lines to which they are adapted, with increased prospect of contentment and success. It should further become our function to teach the methods of acquiring mental poise—how to parry mental and moral stresses when they come, or how to bear them when they fall to our lot. The soldier cannot be expected to fight intelligently or win victory in warfare unless he has been adequately trained. So in the battle against disease and disease-begetting habits, the individual must be forearmed and forewarned if he would win in the contest. Who should do this but the physician; and what phase of human conduct in the young is more fraught with danger than the sexual sphere? Yet what are we doing as practitioners, or as public health officers, to give aid and training in these matters?

Sex-inquisitiveness begins to assert its driving power early in life. Parents generally taboo the question; some taking the view that children should learn of sexual facts and dangers by blundering into them as their parents before them; others refrain from instructing their children partly through ignorance of what should

be said, and partly from prudish modesty. As a rule things drift and children learn the naked and shocking story (only part true and misleading) from boastful and sensuous adventurers who besmear the whole sex relationship with nastiness. A morbid curiosity is aroused and an overpowering desire for its gratification takes possession of the individual. Sensuous pictures and imaginative suggestion are followed by realistic exploits. Not only is there the undermining of sex-stamina, but youth almost universally comes to look upon procreation as necessarily a lewd and sinful act. He fails to comprehend the higher purpose and aim—the sanctity of the union of the sexes. He does not realize that cohabitation is merely an incident in the larger problem of life and its perpetuity. It should be one of the highest duties and one of the most exalted aims of the physician to lift sexual relationships from the plane of unthinking and uncontrolled brutish impulses, to the sanctity of the marital state, with its greatest physiological prospects—the begetting, bearing and rearing of children.

My observation is that as a rule physicians, like parents, are loath to instruct the young concerning sex-problems as related to the maintenance of health and virtuous conduct. Seldom indeed do they give fatherly counsel in such matters. Amongst those who essay to give moral advice in proper cases, it is interesting to note the difference in methods. Some are artless and arouse antagonism rather than cooperation. Curiously there is not a rare type of physician observed from whom one would least expect moral advice; yet he is most successful in giving it. He is tactful and powerful in driving home lessons at one time by a dramatic and profane tirade; again by ridicule; or still again by painting a calamitous and threatening outlook. A few possess the power to lead and inspire the patient to fine and determined resolution. Whilst much of the counsel and instruction we should give along these lines is moral in bent, the end-result upon the body is physiological, insuring a larger measure of health and happiness—the chief ends sought by the profession. With the rapid evolution of newer questions in the field of preventive medicine, the sex-problem looms as one to which larger and larger attention should be given in the making of a stronger and better race.

MASSIVE INFECTION OF VACCINATED PERSON WITH BACILLUS TYPHOSUS

That typhoid vaccination produces a high degree of immunity is proved by army statistics. However, no proof has been available that such vaccination could protect against massive infection. A case of massive infection with B. typhosus is reported by Brooks C. Grant, Washington, D. C. (*Journal A. M. A.*, Feb. 19, 1921) on account of the rarity of such an occurrence. A technician in the laboratory while working with a heavy suspension of living B. typhosus sucked approximately 0.5 Cc. of this culture suspension through the cotton plug of the pipet into his mouth. He immediately washed his mouth thoroughly, three times, with 50 percent alcohol. This soldier was last vaccinated with triple typhoid (saline) vaccine, one year and two months prior to his infection. He was at once given 0.5 Cc. of triple typhoid vaccine in the hope of increasing his immunity. Four days after infection, he complained of slight headache, but had a normal temperature. No further symptoms appeared until the eighth day after infection, when he complained of slight headache and weakness. On the twelfth day a specimen of feces was collected and plated on Endo medium in the usual manner. The typhoid-like colonies appeared in a proportion of about 1.10 of B. coli. These were picked and proved to be B. typhosus by the customary sugar serum reactions. Other symptoms did not appear.

RELATION OF INCREASED BLOOD VISCOSITY TO TRANSIENT ATTACKS OF HEMIPLEGIA

The probability is suggested by William H. Holmes, Chicago (*Journal A. M. A.*, June 11, 1921) that changes in the physical character of the blood may be equally at fault with diseased vessels and changes in pressure. He urges that in the care of patients of advanced years, or those known to have vascular disease, and in those who have had cerebral vascular crises, dehydration of the tissues should be avoided. The introduction of anticoagulant salts and of fluid may be indicated in certain cases of transient hemiplegia or aphasia in order to prevent actual thrombosis in vessels when slowing of the circulation is the cause of the symptoms.

All industrial plants are more or less dusty. But how dusty is the air in any particular plant? The degree of its dustiness is important, for certain forms of air dustiness create in the workers a predisposition to tuberculosis and other diseases, Dr. O. M. Spencer, of the U. S. Public Health Service, shows in a recent report that neither exhaust pipes nor wet processes in grinding and polishing prove that the dustiness in an industrial plant is satisfactorily controlled. Many exhaust pipes do not exhaust, and wet processes may create far more dust than dry ones. Only actual dust counts made at the working level show the actual dustiness; and these should be made periodically.

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EDITORIALS

CHRISTIAN SCIENCE; THE GREATEST DELUSION OF THE AGE

From time to time we have had occasion to offer brief comment or criticism concerning some of the inconsistent, irrational and fallacious opinions and teachings of Christian Scientists, but in practically every instance the Christian Scientists, either through their "Publication Committee" or individual disciples, have sent in a reply for publication. Usually the reply has covered several pages of typewritten manuscript, and not once has there been offered anything that by the wildest stretch of imagination could be considered argument from a sane and logical standpoint. The effusions practically always have been of the vague, intangible and specious type, open to but one interpretation and that carrying with it the suggestion that Christian Science requires no defense and should be believed and relied upon whether understood or not, or whether appealing to the student as rational or not. We therefore have not considered such contributions deserving of space, and, as might be expected, have been criticized for our seeming unfairness in not permitting retaliation when attacked. In the June number of THE JOURNAL the article by Dr. Frank B. Wynn, in which Christian Science is scored mildly, has brought forth a reply from the Christian Scientists for publication, though, as usual with all such replies from the same source, there is a lack of rational argument. Just why the Christian Scientists should devote so much time and energy in answering criticisms and comments in a medical journal is difficult to understand except on the supposition that advertising of whatever kind is profitable, especially when it costs nothing, and everyone knows that the Christian Scientists solicit and receive more free advertising than any other enterprise. Had there been any real argument in what they offered, their replies would have been published, but in view of the fact that the replies assume that Christian Science teachings should be accepted without question and without suspicion as to its fallacy, we have not felt that either fairness or courteousness demanded that we give space to the communications sent in for publication. However, in view of the charge that we have not discussed Christian Science with fairness, but have resorted to the school boy's habit of calling names from a safe distance, we are going to discuss the subject of Christian Science from our standpoint, abstracting freely from earlier writings on the subject, and in doing so we desire to apologize to our readers for consuming so much space.

Christian Science is the greatest delusion of the times; the greatest insult to human intelligence; the strongest proof, if proof be needed, of our low intellectual standard. It seems as though some people must have empty skulls if the miserable jumble of unintelligible drivel, enunciated by a paranoiac woman, is taken by our "cultured" classes as a novel philosophy or an inspired religion. That it is unchristian is proven by the fact that it is at variance with the spirit and teachings of the Christian religion, and that it is unscientific is proven by the fact that its deductions and practices are not founded on knowledge gained by systematic observation, experiment and reasoning. It presents no knowledge that is coordinated, arranged and systematized, and in fact it presents nothing that by the wildest stretch of imagination can be considered as approaching anything that is scientific. Throughout all the writings and teachings of Christian Science we find the same intangible, indefinite and nebulous optimism which takes account of no obligation of things objective save to ignore them, and puts all realities alone in the realm of the subjective consciousness. Yet there are some fairly sensible people who will say, "Well, there is some truth in Christian Science," to which we reply, *there is no truth in it.* Whatever there is of a courageous, cheerful attitude in Christian Science is not peculiar to it; even the old physicians knew the value of cheerfulness very well; they cultivated it themselves and encouraged it in their patients.

As to what is peculiar to Christian Science, that matter is non-existent, that disease is only an error of the mind, that germs are a fiction, that the worst diseases can be cured by a jumbled-up prayer—all this is so stupid and false that one loses patience when confronted with the necessity of discussing it. Physicians recognize the effect of the mental state upon the development of illness; and like true scientists, they give it its true value and relegate it to its proper place. They, furthermore, classify certain affections under the head of mental, emotional, nervous, hysterical, etc., and in their practice they treat such disorders, when recognized, by a method of moral suasion, nervous shock, and hypnotic suggestion.

The mind is known to have an effect on the nerves; for they are each a part of the same sensory process; and the vaso-motor system or

nerves is known to surround the muscular tissue of the blood vessels and to control the supply of blood throughout the whole human organism. Hence, if the nervous system be disorganized through emotion, worry, or hysteria, the normal flow of the nourishing blood to the various parts of the body is disturbed, and we get the phenomena of congestion or anemia,—either an inflammation or a starving of a part. A contented mind, therefore, induces health; while a discontented mind is more likely to produce the opposite. Emotional and hysterical natures are more prone to disease than those that are rational And under hysteria as a cause we may find symptoms which for a time simulate the likeness of many known diseases that spring from external agents. But so deceptive are these symptoms, sometimes, that frequently the physician is misled, and attributes them to the disease which they merely bear likeness to. It is the patients suffering from this class of diseases, whose cases perhaps have been misapprehended by the doctor, who make the chief capital in trade for the Christian Scientists. One cure of a hysteric will outweigh a thousand failures of their mummery and nonsense in organic ailments; and people flock to the quack because of the wonder of his supposed miraculous power. Yet reputable physicians are accomplishing these same cures day by day in their practices, and because they make no mystery of them, do not advertise them with a blare of trumpets and refuse to call them save by their rational name, no alarming wonder ensues. As a matter of fact cures are expected of them, and thousands of cured and grateful patients are discharged every day by regular doctors without a word of comment.

And while the Christian Scientist claims that there is no such thing as matter objectively considered, that disease is only an error of the mind which medicines will not heal, they involve themselves in a curious inconsistency when they cannot escape the surety that in certain cases drugs which are poisons in every instance, without exception, if partaken of, whether consciously or unconsciously, will surely kill. Are these drugs then manifestations of the mind? Or will the Christian Scientist confess that drugs are simply matter? Again, in proof of their theories, they are not willing to submit to any test of their science which shall be scientific and acceptable to all men. It has been suggested to many of the more ardent Christian Scientists and not a few of the "healers" who deny the reality of disease and of the destructive effects of poisons, that they prove the courage of their convictions and permit someone to inject them with the germs of diphtheria, or tetanus, or gonorrhea, or to take a 5-grain dose of morphine or strychnine, or atropine,—but so far not a single Christian Scientist has accepted the challenge.

There never has been any question in the minds of the Christian Scientist "healers" as to the reality of money, even though they deny the existence of pain or disease, and the manner in which they extract from two to five dollars per treatment from their deluded victims is really clever; but the most artistic piece of robbery is the "absent treatment" which brings the usual fees to the "healer". What an easy way to gain money and how delightful it must be to go away on a fishing trip, and while gone make up all the expenses of the trip by charging "absent treatments" to all the luckless victims who are sufficiently deluded in Christian Science to stand the gaff.

Some of the practices of Christian Scientists are attended by unwarranted fatal results, and as an instance we may cite the death of two children from diphtheria, near Richmond, while under Christian Science treatment. Diphtheria now is a curable disease when promptly recognized and promptly treated with antitoxin in suitable doses. To permit two children to die of the disease, with no other help afforded than the nonsensical gibbering of a Christian Science "healer" who chants a few well chosen chapters from the book of Mrs. Eddy while the suffering children are choking to death, is positively criminal. No punishment is too severe for those responsible for a death under such circumstances.

An incident that was amusing, but proved that the contentions of the Christian Scientists are idiotic, came to our notice a few months ago. A young girl became quite deaf and was taken by her mother, an ardent Christian Scientist, to a Christian Science "healer". The "healer", true to his professed belief, attempted to make the girl admit that her deafness was only imaginary or a delusion of the mind, but though the receptive patient diligently read Mrs. Eddy's book, and daily consulted the "healer" for spiritual advice and consolation, the hearing failed to return, and in fact the deafness persisted in becoming more pronounced. After the lapse of more than a month, with no relief, and the exchange of seventy-five real and tangible dollars for Christian Science treatments, the girl finally secured permission from her mother to see an ear specialist belonging to that materialistic class known as regular doctors. The history of the trouble, taken into consideration with scientific functional tests of the hearing and an examination of the ears, indicated that the trouble in all probability was an interference with the sound conducting apparatus which could be remedied easily. Learning that $75 had been spent on Christian Science treatment without securing relief, and believing that he could prove

to the fanatical mother that there was something in the reality of matter with its effect upon health and its functions, the specialist made an offer to cure the daughter of the deafness, without the aid of drugs or knife, and without pain, upon the payment of the same amount that had been paid to the Christian Scientist "healer", the daughter to be the judge as to whether cure had been accomplished or not. Upon earnest urging of the daughter, the mother reluctantly consented to the terms, whereupon the materialistic doctor—he who believes in the reality of matter and the relationship between cause and effect—proceeded with syringe and warm water to remove from each of the young lady's ear canals a large piece of hardened wax, and—miracle of all miracles—the hearing was immediately restored to normal acuteness.

Another case. A child of Christian Science parents began to cry with earache. No amount of mental gymnastics under the schooling of the parents could make the child abandon the claim that the ear pained. A "healer" obtained no better results, and finally, after many hours of suffering, a physician was called. Being materialistic, he insisted upon examining the ear, and, much to the surprise of the parents, succeeded in extracting from the ear canal a bean, which, upon becoming moist after insertion in the ear canal, had proceeded to swell and with swelling had closed the canal and by pressure upon nerves had produced the excruciating pain.

These are but two of the many, many cases criminally neglected or treated by Christian Scientists that have come to the knowledge of medical men.

Think of the number of cases of permanent blindness that would follow Christian Science treatment of all cases of cataract, glaucoma, and some other serious eye diseases; of the number of crippled and deformed people if they always placed their trust in Christian Science after receiving broken bones or other injury; of the unnecessary deaths that would occur from appendicitis, peritonitis, ulcer of the stomach, and many other surgical affections if "healers" instead of educated, trained and experienced surgeons had the management of such cases!

We hear much about Christian Science cures. The Wednesday night experience meetings in the Christian Science churches are given over to a recital of the wonderful cures that have been brought about by Christian Science. And how strange that so many are able to make their own diagnoses, for seldom can it be proved that the diagnoses were made by reputable medical men. In other words, the cures do not stand the light of honest investigation. The diseases, like the cures, are figments of the imagination in a very large percentage of the cases. There have been analyses of many Christian Science cures and in nearly every instance the disease which Christian Science was credited with having cured never existed at all, or if existing was cured or disappeared before the patient accepted Christian Science. On the other hand, the failures of Christian Science are carefully guarded, and except when a medical man is called in to sign the death certificate, or a coroner's inquest is demanded, the evil results following reliance upon Christian Science nonsense are skillfully concealed, thus bearing out the contention that the teachings and practices of the sect tend to encourage deception. Here let us add that the charitable acts of physicians in accepting service when a person is dying under Christian Science care, and then graciously signing the death certificate, is the means of keeping from the public information that very possibly would point unerringly to what in many instances should be considered criminal practices on the part of these fanatics.

If the Christian Science position were true, the whole sequence of mind development as we actually know it would be absolutely reversed, which is contrary to the facts and therefore absurd. A person in order to experience each sensation would have to exert will in order to do so; and no sensation could be received without the exertion of the will. Our own knowledge will tell us how silly this notion is, for many sensations come to us aside from our own volition; as, for instance, the heat and cold that are due to the weather; the painful feelings we possess through the unkindness of our fellow-men; the comfort or discomfort that is present on account of our surroundings; the pain of diseases which ensues from the presence of some specific germ which causes irritation in the tissues; and so on. Furthermore, it is well known that sudden or continued emotions produce a decided effect upon the body. Anger causes us to tremble and to experience unwonted sense of heat. Fear makes the extremities grow cold. Shame causes us to blush. Merriment brings about a certain physical convulsion called laughter. Worry causes a general depletion of the vitality. *But none of these things produce typhoid fever, or diphtheria, or smallpox, or malaria, or a broken leg, or a bullet wound;* and none of these will effect a cure of such specific injuries, although our state of mind, by rendering the functions of our organism harmonious, may do much to assist such a cure.

The point where Christian Science has duped its votaries is this: It has confused the category of diseases that are present through an emotional or nerve disturbing cause with the category of diseases that are present through external causes; and it has placed all manifestations of pain and sickness under the former.

The objection to the Christian Science practitioner or "healer" is that he is uneducated in the laws of anatomy, physiology, pathology and the diagnosis of disease. He refuses to gather, compare, systematize, and analyze facts, or to deduce any system of knowledge from them. His is the same diagnosis and the same remedy for all ailments, no matter what their source or present development; and, therefore, his pseudo-science is based on the deification of ignorance.

What is the moral effect of Christian Science? What do church members think of a religion claimed to be the religion of Jesus, and yet asserting that its principles were discovered and revealed by an illiterate woman? And what are the prospects of moral progress when the teaching is that there is no such thing as sin? What about the influence upon children and the young by teaching them as early as possible to deny and doubt the evidence of the physical senses which were given by an all-wise Creator to convey impressions to the mind, and which would not be present in the human organism unless intended for use? To deny the action of the physical senses and their suggestions is to deny the fundamental possibility of truth. If your child tells you he hasn't felt what he *has* felt, and that he hasn't seen what he *has* seen, and that he hasn't touched what you know he *has* touched, you are positive that he is lying, and you think it is high time to correct or punish him. But Christian Science does the very opposite. It distinctly and authoritatively approves of this habit of mind; and, therefore, it is fostering a rising generation, trained from the beginning in the fundamentals of hypocrisy and deceit.

A reputable physician must have had at least two years of college or university work, at least four years in a medical school, and in some states an additional two years in a hospital are required before he is deemed competent even to *begin* the practice of medicine. Are these well educated and well trained scientific men to be relied upon, or shall we place our lives in the hands of "healers" who obtain their diplomas after attending six or eight vague, indefinite and incomprehensible lectures, and who do not even know the names and locations of the bones, nerves, blood vessels, and muscles of the body? Think what it would mean to depend upon Christian Science and to substitute it for the benefits that have come through the progress of modern science! The plague, cholera, typhus and yellow fever, smallpox, diphtheria, typhoid, syphilis, consumption, and many other diseases are no longer the awful menace to life that they were of old. Tetanus or lock-jaw, and hydrophobia are now cured by a specific lymph, whereas formerly nearly all cases proved fatal. Antitoxin has reduced the mortality from diphtheria to about five percent and it is thought that it would be zero if the treatment could be administered early enough and in suitable doses in every case. The scourge of smallpox, which a hundred years ago swept whole communities and killed or disfigured for life a very large proportion of all those who contracted the disease, is a thing of past history, due to thorough and systematic vaccination. Child-birth deaths have been reduced to one-seventh what they were before the advent of asepsis and antisepsis, and our blind asylums, formerly filled with luckless children who lost their vision soon after birth, from ophthalmia neonatorum, are now no longer recruited by victims of that disease. The care in preparation, and the standardization of drugs, the inspection and sterilization of milk, the scientific supervision of the making and distribution of foods for infants and children as well as for adults, have all contributed to the checking and prevention of disease. Are we to cast aside these benefits, brought about through years of patient and intelligent investigation and labor and substitute for them the offerings of an uninformed and misguided sect of ultra-emotionalists? Are we to throw aside all that has been accomplished by medical men, representing the life work by some of the brightest intellects that the world has ever seen, and are we to deny the value of the results of their work when incontrovertible proof of their findings is patent to every rational human being? Is there no truth in anything, and is there no relationship between cause and effect? Are there no facts which can be proved by the most competent testimony of trained minds? We have no criticism to offer when the delusion of Christian Science concerns no one but the individual possessing it, but it becomes a serious matter when it affects the lives and happiness of others in the community. Let the Christian Scientist believe in the non-existence of matter and the unreality of disease, but do not let him recklessly become the instrument of spreading contagious diseases, nor permit him to subject innocent and defenseless children to the horrors of neglect, and to the miseries of pain and sickness.

JOHNS HOPKINS DECISION CONCERNING SURGICAL FEES

The newspapers announce that Johns Hopkins University has established a thousand dollar fee as the maximum amount which any surgeon connected with that institution can charge for an operation. As might be expected, and as no doubt was desired, there has been much controversy in the public press all over the country as to the wisdom or fallacy of such a ruling. To us it looks like a cheap advertising stunt

for Johns Hopkins University, or perhaps we might say a scheme for filling the hospitals of that institution with surgical cases. At all events, a university that has been held in such high esteem by the medical profession because of its high standards of medical education, should be in better business than trying to fix an arbitrary standard to govern the value of surgical services rendered to patients irrespective of ability to pay. It is as illogical as it is unfair to permit the millionaire to enjoy the benefits of a skillful surgical operation which saves his life at a cost of but one thousand dollars when he unhesitatingly spends more than that amount every year for his cigars, pays a chef ten to twenty thousand dollars a year, buys automobiles at fifteen or twenty thousand dollars apiece, and spends thousands in maintaining private yachts and buying baubles of various kinds. Of course the lawyer can charge this same man one hundred thousand dollars for securing a divorce from his wife, a former Broadway chorus girl, and nothing is thought of it, but the skillful and experienced surgeon who saves his life by a skillful operation must be content with a thousand dollar fee. We have no quarrel with the Johns Hopkins University for its charity work, or its absorption of fees charged for work done by the surgeons connected with the institution, but we do believe that the fees for surgical work should be consistent with the ability of the patient to pay. Under such circumstances a very large proportion of the people who are given skillful surgical attention will get off with a payment of little or no money, and the few who pay large fees will be limited in number and not only quite able to pay the fees charged but probably will pay them gracefully and without a word of complaint. To come down to brass tacks, it is impossible to place a correct monetary value upon health or life. Some states have a standard whereby a life is considered as worth ten or fifteen thousand dollars from a purely economical standpoint. That being the case there is no reason why a surgeon should be limited to a thousand dollars if he saves a life that is worth ten or fifteen times that amount. Some rich men have been known to offer a million dollars for a new stomach or for the recovery of eye sight, so it is very evident that there is a varying standard of values, even among the laity, so why try to fix a fee for the medical man which will apply in every case for the services that he shall render. Again we think that Johns Hopkins University has made a cheap play to the galleries, and ought to have a higher standard of propriety and one in keeping with its other high standards.

NATIONAL CANCER WEEK

Plans for National Cancer Week to be held from October 30 to November 5 have been announced. This is one of the biggest and most important movements undertaken by the National Cancer Research Committee, and should be of immense value in educating the public on this most important question. The main features of the campaign are summarized as follows:

1. ORGANIZATION.

As it is desired to reach all parts of the country and as many of the population with the hopeful message of cancer control as possible, it is of course necessary to effect a complete organization before anything else can be done. It is therefore recommended that the State Chairmen undertake to see that a Chairman of a Local Committee is appointed for every community of five thousand population or more in his State. The Chairmen of these local committees should then select their local committees for the purpose of carrying out the following program:

2. ACTIVITIES TO BE UNDERTAKEN.

The aim in this campaign is, as stated above, entirely educational and designed to reach as many people as possible. The three main activities to be pursued may be briefly summarized as follows:

(a) *Lectures.*

A lecture bureau should be established and the lecturers instructed by use of the Society's syllabus, as to how the subject should be presented. Lectures should include both those arranged for professional groups, such as medical societies, nursing organizations, etc., and those for the general public.

(b) *Literature.*

The Society will provide a moderate quantity of literature to be distributed at meetings. As the amount available for any state must at this time be apportioned in accordance with some arbitrary method, such as population or number of members in the Society from that state, it is quite probable that it will be desirable for either the state committee or local committees to secure a modest sum for the purchase of additional printed matter. This can be secured at cost from the National Society, the little circular "Vital Facts About Cancer" recommended for this purpose being quoted at $20.00 per five thousand or $35.00 per ten thousand.

(c) *Publicity.*

This also falls naturally under two main headings, articles in professional journals and those in the lay press. It would probably be desirable to place the latter in the

hands of a trained newspaper man for all material should be carefully prepared and edited before it is given out. The news articles are simple; but abstracts or digests of the lectures given should be handled with extreme care. The editors of medical journals should be asked to cooperate by calling the campaign to the attention of their readers and asking for the cooperation of the profession. Editors of these journals will doubtless be willing to feature the educational campaign for the control of cancer in some number preceding the campaign.

EDITORIAL NOTES

THE annual session of the Indiana State Medical Association will be held in Indianapolis on Wednesday, Thursday, and Friday, September 28, 29, and 30, 1921. Remember the date and arrange accordingly.

THE preliminary program for the Indianapolis session is published in this number of THE JOURNAL. It indicates that the various sections will provide interesting programs. We suggest that those who are to open the discussion of papers should obtain the complete copy of papers they are to discuss.

WE learn that there is to be a rupture in the State Board of Health and that the domination of the "regulars" is to cease. Perhaps it is just as well to let the people have a taste of incompetency and inefficiency, for that is exactly what will happen if the peculiar and irrational ideas of some of the irregulars are to prevail. Sometimes we have to burn our fingers before we learn that the stove is hot.

WE feel guilty in giving so much space in this number of THE JOURNAL to a discussion of Christian Science, but we are disposed to give our reasons for condemning Christian Science, and if the disciples of that peculiar cult can answer our arguments with anything more than vague and meaningless replies such as we have been receiving and which we are criticized for not publishing, we shall be pleased to give space to the contributions.

AT a recent meeting of the Michigan chiropractors, held at Jackson, "Doctor" Palmer, the alleged "father" and "high priest" of the cult, from Davenport, delivered an address in which he made the following statement: "Give me the public press and the power of public opinion, and you may write as many laws as you please upon the statute books." Palmer is right, and if the medical profession had realized this fact long ago, we would not have any quacks and charlatans to fight at the present time.

IT is very evident that either the chiropractic craze is on the wane or that chiropractors are getting so thick and competition so acute that not only must business be secured through alluring advertisements but by the cut-rate method as well. It is not at all uncommon at the present time to see advertisements like the following: "The Old Reliable Chiropractor. Improved Methods of Treatment. Satisfaction Guaranteed." It reminds us of the solicitations of the less recognized members of a trade. But then, eventually we may expect most anything, for chiropractic is neither a profession nor a trade. It is mostly humbuggery.

CHIROPRACTIC gains another victory! Nuxated Iron placed in the background! According to a communication in a recent number of the *Journal of the A. M. A.*, credit for Jack Dempsey's recent victory is given to chiropractic, and Nuxated Iron is no longer in the ring. The communication states that Iowa newspapers have given lengthy and elaborated reports to the effect that adjustments by the chiropractor who was on Dempsey's training staff deserves the credit for Dempsey's wonderful victory. It is strange that Nuxated Iron should lose first place in these prohibition days! However, we must give "honor" where "honor" is due!!!

WE are still waiting for a reduction in the price of instruments and surgical appliances. During the war there may have been some excuse for the enormous increase in the prices. though we have felt that surgical instrument makers always have profiteered, yet we do not feel that there is any excuse for continuing the war prices at this particular moment. Somehow or other the law of supply and demand does not seem to cut any figure in the price of equipment, for the doctor who gets his mind set upon buying something of particular make or particular manufacture makes his purchases irrespective of what the price may be. The manufacturer is not slow to realize this fact and take advantage of it.

WE desire to remind the members of the Indiana State Medical Association that at the time of our annual session Indianapolis will be crowded with Grand Army veterans and their friends who will be holding a convention in Indianapolis on the same dates as we hold ours. It is quite likely that the hotels will be crowded up to and including Wednesday, September 28. when many of the visitors will be leaving. It would be well for the members of our Association to make hotel reservations at once, if possible to do so. We are advised that the Indianapolis hotels will make every endeavor to care for us in a proper manner, and that they

feel confident that they can make reservations for Wednesday night, providing applications are sent in promptly.

THE Committee on Arrangements for the annual session of the State Association have reserved one hundred rooms at the Claypool Hotel for members of the Association. It was necessary to do this on account of the National G. A. R. Encampment which is held there at the same time. The rates for the rooms will be as follows: Single room with bath, $3.50 to $6.00; double room with bath, $4.00 to $7.00. If you wish a room reserved for you, kindly state the day and the hour that you expect to arrive, accompanied by your check for one day's accommodation. You will then be mailed a receipt entitling you to the room. Mail all correspondence to Dr. C. H. McCaskey, Chairman Committee on Arrangements, 422 American Central Life Building, Indianapolis, Indiana.

"AFTER several years of effort a new medical practice law finally has been secured in Florida, clearing away the obsolete multiple board arrangement which for many years has caused much confusion in medical licensure in that state. The new law establishes a composite board which has full authority to refuse or revoke licenses, to refuse recognition to low grade medical colleges and to protect the public against incompetent physicians. The personnel of those appointed on this board promises assurance that the provisions of the new law will be enforced. The people of Florida are to be congratulated on the successful passage of this law, and it is hoped that they will appreciate its importance and support its vigorous enforcement. The only flaw in the act is that osteopaths and chiropractors are exempted from the requirements of the medical practice act since, for the time being, their practice is regulated by separate boards. In time, however, when public opinion has been awakened to the injustice and unwisdom of providing an inferior standard of qualifications for any group of healers, these special boards may be abolished, as they were this year in New Jersey. Public opinion will not long uphold an evident injustice, once attention has been clearly called to it."—*Journal of the American Medical Association*, July 30, 1921.

UNCLE SAM has a rather peculiar way of doing business. He is painfully exacting in securing what is his due, but very negligent or procrastinating when it comes to giving attention to dues from him to others. There is no such thing as an orderly system in the conduct of Uncle Sam's affairs except in the collection of taxes and then the taxpayer feels the grip of the powerful hand that squeezes until it hurts. We are reminded of all this by the almost criminal carelessness with which the government insurance records are kept, the inexcusable delay in paying the soldiers the indemnity that is due them and badly needed, and the promptness with which Uncle Sam exacts payments from these same soldiers for anything that may be due, and the certainty with which penalty is exacted for non-payment. Then to rub it in, acknowledgement of payments is seldom if ever made if payments go through the mail, and the poor devil who makes his remittance is never quite sure whether the obligation has been canceled or not. Perhaps we should not complain, for the good old United States is still a better place to live than any other place on earth, and we are a long way from the governmental oppression of Russia or some of the other European countries, but it does seem as though honor and fairness on the part of the government is just as necessary and commendable as it is in individuals.

DOCTORS, like all other professional and business men, are solicited by promoters and brokers of every kind and description who have investment propositions for consideration. We long have advocated the plan of buying safe and sound securities, giving a fair amount of income, as being the best for the doctor who generally has but limited funds to spare, and, at this particular time, when so many presumably good securities are offered the public, the advice is all the more appropriate in view of the uncertainty of business conditions. Doctors have the reputation of being easy marks when it comes to buying something that offers big returns, but even admitting the fact that pure speculative investments are shunned, there is room for considerable caution in buying what seems to be safe securities. For instance, some bankers and most of the brokers will recommend stocks and bonds having a high yield, and yet the very fact that these securities offer a yield above the market rate is quite sufficient to make one suspicious as to their soundness. Generally speaking, the more secure the investment is, the less return in the way of dividends. However, it is better to be safe than sorry, and the doctor who has a little money to invest will be wise if he picks out the safest securities, and so judged by his banker, even though the returns are not so great as those offered by investments of a more questionable character. This reminds us that there is nothing better and nothing safer than government bonds, which at the present rate below par makes them a good buy.

DR. GEORGE F. KIEPER, of Lafayette, writes us concerning the poor showing made by Indiana doctors on the membership rolls of the American Medical Association as well as on the subscription list of the *Journal of the American Medical Association*. The criticism is well taken, for we feel a little ashamed of the fact that such a limited number of the members of the Indiana State Medical Association have identified themselves with the American Medical Association or even subscribed for its Journal. In the first place, every reputable Indiana doctor ought to identify himself with the A. M. A., and no Indiana doctor who professes to be at all progressive or up to the times in medicine will fail to subscribe for the *Journal of the A. M. A.*, the largest and by far the best general medical journal published in the world. Generally speaking, it is the better class of men who buy medical journals and medical books, and in reality the least competent men, or the ones who need the educational effects of late medical books and current medical journals are the ones that need them the most. The incompetent doctor is always the one who not only never acquired a good education, medically or otherwise, but makes little effort to improve his condition. He is the one who does not think it worth his while to join the A. M. A. or take current medical journals, of which the *Journal of the A. M. A.* holds first rank, and he also considers himself so smart that he cannot find benefit from attendance upon his county medical society meetings or the sessions of the state medical association. We have prided ourselves upon having a very progressive medical profession in Indiana, but we admit there is room for very great improvement through an increase in the number of medical men who affiliate with our great national medical organization and subscribe for its wonderful medical journal.

ACCORDING to a decision of the state supreme court on June 22, the Illinois Medical Practice Act, as revised in 1917, is unconstitutional. This decision was handed down in the case of Lucius J. Love, a chiropractor of Davenport who refused to take out a license. According to the *Illinois Medical Journal* "the court's opinion holds that the revisions of requirements for chiropractics are unreasonable and discriminatory. The court's action restores the old medical practice act in effect prior to the revision.

"It was announced that a motion for a new trial will be filed. In the meantime numerous prosecutions instituted by the state department of registration and education will be held up until this motion is disposed of.

"There is little hope that the revision will be saved, however, as the opinion of the court, which was prepared by Justice Duncan, was concurred in by the full membership of the bench.

"The decision is a blow to the state medical society, which spent much time in preparing the revision of 1917, but it brings joy to the heart of President Palmer of the Des Moines (Ia.) Chiropractic school, who has been protesting against the act ever since its passage. Love, who made the fight in the supreme court, is a graduate of the Palmer school.

"The revision of 1917 was prepared by Chas. E. Woodward, now president of the state constitutional convention. Its one weak spot, it seems, was the section which revised the law relating to osteopathy, chiropractics and practitioners other than medical doctors.

"The old law provided for an examination and the licensing of these practitioners, but did not undertake to specify the qualifications required of applicants for licenses.

"In making the revision, applicants for licenses were required to pursue a course of study equivalent to that of the medical practitioners and in addition qualify in their own school. The educational qualification contemplated a period of four years in college.

"Love took a two years' course at the Palmer school and then asked to be examined for a license. This was denied, and on advice of his attorney he began to practice for the purpose of testing the constitutionality of the law."

IT strikes us as rather amusing that various irregulars who loudly prate of their disdain of drugs and medication of any kind do not omit drug prescriptions in their practice, whenever they can get away with it. Osteopaths, chiropractors, and even opticians, to a very large extent, not only prescribe but dispense medicine. We never have understood why osteopaths, who claim that their practice is drugless, could even secure a license under the Harrison Anti-Narcotic law, and yet we know that certain osteopaths regularly prescribe opiates and presumably they do so under federal license. They also prescribe and use other drugs and chemicals, seemingly with impunity, and what is true of the osteopaths is also true of the chiropractors. The opticians, or as they sometimes like to call themselves, "eye-sight specialists", have no hesitancy in attempting to treat various eye diseases, even glaucoma and cataract, and the strange feature of the whole affair is that druggists will fill prescriptions written by opticians. But then, all of these law breakers have discovered that our medical practice laws are dead letters and could just as well be wiped from the statute books as far as any benefit to the public is concerned. In fact, we are in favor of abolition

of laws that cannot, or will not, be enforced. There was a time when the medical practice laws could have been enforced in every state in the Union, and it only required the united influence of the medical profession, backed by the intelligent portion of the public, to make a medical practice act a more protective feature and of some benefit to the public. Laxity on the part of Boards of Medical Registration and Examination, or a "let George do it" attitude on the part of the rank and file in the medical profession has resulted in a gradual increase in the wave of law breaking as pertains to medical practice, until now it is next to impossible to stem the tide. Those of us who have been waving the danger signal have been called alarmists, and even laughed at for our temerity, but events have indicated that had the warning been observed the public would not be suffering today from a horde of medical incompetents and pretenders who are not only practicing medicine without let or hindrance but through sheer force of numbers and financial ability to defend themselves, are rather safely entrenched and seemingly difficult to dislodge. A leading exponent of the chiropractic faith says if the public is being harmed, let the public repair the injury. In the end perhaps the public will turn and correct the evils of today, and when that time comes there will be a day of reckoning for the pretenders which will bring about painful results. In the meantime the pseudo-medical cults are reaping a harvest.

DEATHS

DR. SALLIE STEPHENS, who has been a medical missionary in India for the past forty-two years, died at the Methodist Hospital, Indianapolis, July 23, 1921, aged sixty-three years.

DR. JESSE L. HILL, of Lowell, Indiana, died at his country home near that city, July 20, 1921, at the age of seventy-seven years. He was a graduate of the Rush Medical College, of Chicago.

DR. MARSHALL D. CALLANE died July 21, at his home in Flora, Indiana. He was a graduate of the Indiana Medical College, of Indianapolis, and was a member of the Carroll County Medical Society and the Indiana State Medical Association.

DR. PAUL ARMSTRONG, of Muncie, Indiana, died July 18, at the age of 44 years. He was a graduate of the Barnes Medical College of Saint Louis and had practiced medicine in Gilman, Indiana, for thirteen years before his removal to Muncie.

DR. GEORGE A. THOMAS, of Bismarck, Indiana, died July 10, 1921, at the age of forty-two years. Dr. Thomas was a graduate of the Bennett Medical College of Chicago. He was a member of the medical corps of the United States Army during the world war, and served six months abroad.

DR. LINDSEY L. WHITESIDES, of Franklin, Indiana, died July 17, at the Methodist Hospital, in Indianapolis, aged sixty-one years. Dr. Whitesides graduated from the Medical Department of the University of Louisville in 1883 and was a member of the Johnson County Medical Society, the Indiana State Medical Association and the American Medical Association. He had been county and city health officer for a great number of years and had served several terms as a member of the State Board of Health.

NEWS NOTES AND PERSONALS

MRS. JOHN B. MURPHY, widow of the well-known surgeon, died at a hospital in Chicago on July 12.

DR. I. S. MILLSTONE, of Gary, has entered Rush Medical College of Chicago for a course in dermatology.

DR. AMOS CARTER was recently re-elected to the superintendency of the Tuberculosis Sanitarium at Rockville.

THE Highland Sanitarium at Martinsville, Indiana, has been sold to Jap Jones, who will act as manager of the institution.

DR. A. FISHER and DR. C. M. MCVEY recently formed a partnership for the practice of medicine in North Judson.

DR. L. N. GEISINGER, of Auburn, has resigned his position as secretary of the Board of Examining Physicians of DeKalb county.

THE home of Dr. P. T. Lampton at Milroy was damaged to the extent of two thousand dollars by fire on the evening of July 4.

DR. S. C. WALTERS celebrated his sixtieth birthday anniversary on June 14, by entertaining thirty-six doctors at his home in Middletown.

DR. H. K. BONN, of Indianapolis, has returned from an extended trip in the West, where he attended a number of the Western clinics.

DR. J. T. CARNEY, a graduate of the University of Louisville, has established himself in Batesville, Indiana, for the practice of medicine.

DR. W. F. CLIPPINGER has been appointed by the county commissioners of Vanderburg county as physician for the County Infirmary for one year.

THE annual picnic of the Howard County Medical Society was held June 23 at Indian Springs. The members and their families and guests enjoyed the outing.

THE tuition fees of the Medical School of Harvard University have been increased from $225 to $300, the increase becoming effective with those entering next year.

DR. D. R. SAUNDERS, of Franklin, was chosen by the county commissioners as health officer of Johnson county, to finish the unexpired term of the late Dr. L. L. Whitesides.

APPOINTMENTS as consultants to the National Pathological Laboratories have been accepted by Drs. George Dock, of St. Louis; Otto Folin, of Boston, and Ludvig Hektoen, of Chicago.

DR. ROBERT BRAUNLIN is now associated with his brother, Dr. W. H. Braunlin, of Marion, Indiana, in the practice of ophthalmology and otolaryngology.

DR. MILES F. PORTER, SR., of Fort Wayne, gave an address at a meeting of the Warsaw Rotary Club on July 15, his subject being "Cancer; Its Prevention and Its Cure".

DR. GARDNER C. JOHNSON, superintendent of Boehne Camp, Evansville, has been attending the Trudeau School of Tuberculosis at Saranac Lake, New York, for the past two months.

THE members of the Fort Wayne Medical Society held their annual picnic at the Elks' Country Club on Tuesday, June 28, 1921. About seventy-five members were in attendance.

DR. ETTA CHARLES, of Anderson, recently has been graduated from the Lakeside Hospital at Cleveland, where she completed a course in anesthesia at Dr. George Crile's clinic.

THE degree of Doctor of Science was awarded at the recent commencement exercises of Brown University to Dr. Hideyo Noguchi, pathologist and bacteriologist, of Rockefeller Institute.

DR. J. D. MCCANN, of Monticello, has been made president of the Railroad Surgeons' Association. Dr. McCann was formerly secretary-treasurer of the west division of the organization.

DR. PAUL R. TINDALL, of Greensburg, will remove to Shelbyville in the course of a few weeks, where he will be associated with his father, Dr. Charles H. Tindall, in the practice of medicine.

ON Wednesday night, June 29, the offices of Drs. M. F. Porter, Sr., M. F. Porter, Jr., and B. P. Weaver, of Fort Wayne, were entered and robbed, the loss being estimated at thirty-five dollars.

DR. and MRS. H. A. KINNAMAN have moved from Danville, Indiana, to Crawfordsville, Indiana, where Dr. Kinnaman has opened his office in the Ben Hur Building for the practice of medicine.

DR. LYMAN OVERSHINER, of Columbus, Indiana, who has been taking special work in diseases of the ear, nose and throat at a Chicago clinic for the past several weeks, has returned home and resumed his practice.

DR. OKLA W. SICKS, house physician at the French Lick Hotel, was married July 14, 1921, to Miss Norma Jane Sutton. After a short stay at Lake Wawasee, they will be at home at the French Lick Hotel.

DR. THOMPSON R. RICE and family, of Petersburg, left early this month for a motor trip to California. They expect to spend the winter in the West and Dr. Rice will do postgraduate work while there.

THE license of Dr. A. A. Hill, of Indianapolis, was revoked on July 14 by the State Board of Medical Registration and Examination, after he had been convicted in the Marion Criminal Court of performing an illegal operation.

DR. D. S. QUICKEL, of Anderson, Indiana, and Miss Bertha I. Davis, of Phœnix, Pa., were married Thursday, July 21. After September 1, Dr. Quickel and his wife will be at home at 2204 Noble street, Anderson, Indiana.

DR. OMER WOOLRIDGE, of Indianapolis, former director of the United States health clinic at Evansville, has been succeeded by Dr. R. R. Acre, of Indianapolis. Dr. Woolridge has been transferred to Chicago.

DR. GEORGE I. INLOW, of Blue Ridge, has been appointed coroner of Shelby County by the Shelby county board of commissioners, to succeed Dr. B. G. Keeney, of Shelbyville, who has resigned to take up other work.

DR. J. W. KANNEL, of Fort Wayne, was made first vice-president of the National Eclectic Medical Association at the annual session held at Colorado Springs. The next session of the association will be held in Indianapolis.

THE Medical Department of the Navy has planned the construction of an enlarged hospital at San Diego, California, at a total cost of $1,975,000. The city of San Diego has donated additional land for the proposed new hospital.

DR. O. R. LYNCH and wife have returned to Peru, where Dr. Lynch will resume his practice, after an extended tour of the West. While absent Dr. Lynch took postgraduate work at several of the leading medical institutions.

DR. J. B. MAXWELL, who for the past two years has been practicing medicine in Warsaw, Indiana, has returned to Lucerne, where he will assume the duties of Dr. S. E. Jones. Dr. Jones will go to Chicago to continue his medical studies.

DR. RAGAL R. ACRE, resident physician at the Indianapolis City Hospital, has been appointed director of the United States Public Health Service in the Evansville district. Dr. Acre is a graduate of the Indiana University School of Medicine.

DR. J. E. HIATT, formerly of Newcastle, who recently removed to San Antonio, Texas, because of ill health, is seriously ill with heart trouble at the home of relatives in Sheridan, Indiana, where he was taken after he was stricken with the illness.

FIFTY physicians were in attendance at the annual session of the Seventh District Medical Society at Franklin, Indiana, on July 6, 1921. Addresses were given by Drs. L. P. V. Williams, T. C. Kennedy, J. L. Tierney, Louis H. Segar and J. S. Ragan.

DR. J. THERON SHORT, after a year of special work in the Johns Hopkins Hospital at Baltimore, has associated himself with the clinic now being established in Fort Wayne by Dr. H. A. Duemling, where he will have charge of the department of urology.

DR. B. W. RHAMY announces the removal of the Fort Wayne Medical Laboratories from the Gauntt Building to 327 West Berry street, where a new giant x-ray apparatus will be installed. The new laboratories will be thoroughly modern in every respect.

THE Medical College of Fordham University passed out of existence on Thursday, June 16th, after the graduation of the 1921 class. The college has had a deficit for the sixteen years it has been in operation, averaging $21,429 yearly.

TWENTY-FIVE counties were represented at the meetings of the Indiana Tuberculosis Association, held in Indianapolis July 1 and 2. Miss Grace M. Osborne, of New York, assistant national crusade director, was in charge of the sessions.

THE Fort Wayne service station of the Victor X-ray Corporation has been discontinued. New offices have been opened at 917 Fletcher Savings and Trust Building, Indianapolis, under the direction of M. C. Olson, who is territorial sales distributor for this community.

IT has been announced by Surgeon-General Ireland of the Medical Department of the Army that forty-three of the forty-seven reserve officers of the Medical Corps will be retained on active duty to care for the war risk patients now being treated in army hospitals.

DR. J. B. MAXWELL, who has been practicing medicine in Atwood, Indiana, has removed to Lucerne, where he has taken over the practice of Dr. S. E. Jones. Dr. Jones is taking postgraduate work in Chicago and will locate elsewhere after he completes his work.

THE increase of pellagra in the South, as recently reported in the statistics of the United States Public Health Service, show that there may be twice the number during the present year as compared to last year, and in some places the previous records may be tripled.

DRS. C. E. LEEDY and C. R. LONG entertained the members of the Kosciusko County Medical Society and the Whitley County Medical Society on June 28 at a banquet given in Pierceton. An address was given by Dr. Allen Hamilton, of Fort Wayne, on the subject "High Blood Pressure".

NEW buildings and additions are to be added to the National Home of Lepers at Carville, La., which is owned and controlled by the United States government through the United States Public Health Service. Improvement expenditures amount to $68,833 and include the erection of seven cottages.

DR. ROSS OTTINGER, of Indianapolis, was elected president of the Seventh District Medical Society for the coming year at the annual

session held in Franklin, Indiana, July 6, 1921. Dr. Bernard J. Larkin was made secretary-treasurer. The next meeting of this society will be held at Indianapolis, in October of 1922.

DRS. A. H. UNTHANK, of Marion, and KATHRYN M. WHITTEN, of Fort Wayne, have purchased the residence at 343 West Wayne street, Fort Wayne, which they will remodel for occupancy as a home and office. Dr. and Mrs. A. E. Fauve, from whom the site was purchased, have returned to France, where they will locate permanently.

IT has been announced by the Rockefeller Foundation that a contribution of $35,000 has been made to New York University to provide a clinic in the new building which the university is erecting. A branch laboratory of the New York State Department of Health will be housed in the new building. This gift supplements the contribution of three hundred fifty thousand dollars made last year by the General Education Board.

DR. ALFRED S. BURDICK has been elected president of the Abbott Laboratories to succeed the late Dr. W. C. Abbott. Dr. Burdick is a graduate of the Alfred University, Alfred, New York, and of Rush Medical College, Chicago. He has been associated with the Abbott Laboratories for a period of seventeen years, and for a number of years has served as vice-president and assistant general manager.

DR. BAILLON, of the Faculty of Medicine of Paris, has come to America for the purpose of revealing the seriousness of the tuberculosis conditions in France, and to seek members for the Franco-American Committee to Fight Against Tuberculosis. He reports that there are 1,900,000 cases of tuberculosis in France, with only 10,000 available beds for the invalids, and that the deaths have reached 20,000 yearly.

THE following officers were elected for the ensuing year at the thirty-third annual meeting of the American Pediatric Society held in Swampscott, Massachusetts, June 2, 3, and 4, 1921: President, Dr. Maynard Ladd, of Boston; vice-president, Dr. Percival J. Eaton, of Pittsburgh; secretary-treasurer, Dr. Howard C. Carpenter, of Philadelphia; editor and recorder, Dr. Joseph Brennemann, of Chicago.

THE director of public welfare of the Post Office Department, L. F. Krankel, has made arrangements with the American Red Cross for the organization of classes in first aid in the post offices of the country. Instructors will be sent around through the country for the purpose of instructing postal employees in the use of first aid kits, which will be supplied at cost. The plans of public welfare in this department have been approved by Postmaster General Hays.

DR. WALLACE CALVIN ABBOTT, founder and president of the Abbott Laboratories, died July 4 at his home in Chicago. Dr. Abbott had done extensive research work along the line of new medicinal chemicals and was author of a number of medical books. He also was editor-in-chief of the *American Journal of Clinical Medicine*. He had been president of the Abbott Alkaloidal Company and the Abbott Laboratories since their establishment more than thirty years ago.

THE Sheppard-Towner Bill (for the protection of maternity and infancy) passed the Senate July 22, but failed to pass the House of Representatives. Extended hearings have been held in the House Committee on Interstate Commerce relative to the merits of the bill, which provides for cooperation between the federal government and the states and authorizes the expenditure of $1,480,000 in establishing centers of information on the subject of infant hygiene and maternity.

A SUM amounting to $360 for the encouragement of research work by pharmacists, will be available after October 1, 1921, from the American Pharmaceutical Association. Communications concerning financial assistance should be sent to Prof. H. V. Arny, chairman, American Pharmaceutical Association Research Committee, 115 West Sixty-eighth street, New York, before September 1. Communicants should give their past record and outline of the particular line of work for which the aid is desired.

THE Tenth District Medical Society was entertained on July 19 by the members of the Jasper-Newton Counties Medical Society, at Hazelden. About sixty-five doctors attended. During the course of the program for the day the following addresses were given: "The Diagnosis of Acute Abdominal Infections," by Dr. Peter S. Clark, of Chicago; "Treatment of Fractures," by Dr. Dean Lewis, of Chicago; and "Diagnosis and Treatment of Hyperthyroidism," by Dr. J. A. MacDonald, of Indianapolis.

In addition to the articles enumerated in our letter of July 1st, the following articles were accepted during June: Lederle Antitoxin Laboratories—Pollen Antigen-Lederle (Ragweed). Pollen Antigen-Lederle (Timothy).

During July the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial

Remedies: The Abbott Laboratories—Argyn. Hoffman LaRoche Chemical Works—Papaverine Sulphate Tablets-Roche. Nonproprietary Articles—Casein.

GOVERNOR W. T. MCCRAY recently announced the appointment of a State Board of Examination and Registration of nurses in compliance with the 1921 act. The members, five in number, are: Miss Catherine McManus, Indianapolis, St. Vincent's Hospital; Miss Nellie Brown, Indianapolis, Robert W. Long Hospital; Miss Mary Louise Happel, Walker Hospital, Evansville; Miss Elizabeth Springer, superintendent of the Huntington Hospital, Huntington; and Miss Ida McCaslin, Martinsville, Morgan County health nurse.

DR. JAMES A. GRAHAM and family, of Hammond, sailed for Vienna on July 14, where Dr. Graham will study under Professor Antone V. Eiselberg, head surgeon of the University of Vienna, for a year before returning to America. On the trip to Vienna Dr. Graham will visit Rome, Naples, Florence, Milan and other cities, and while in Vienna will give his attention to general surgery. Dr. Graham goes with a party of forty surgeons from this country who are exchanging with an equal number of scientific men from the accredited laboratories of Austria-Hungary.

REPORTS relative to injurious accidents caused by the operation of the roentgen-ray apparatus may be addressed to any of the members of the recently appointed Safety Committee of the American Roentgen-Ray Society. This committee was appointed for the purpose of giving consideration and correct data regarding these injuries, which information will be used in determining the cause of accidents and best means of preventing them. The members of the new committee are: Drs. W. D. Coolidge, Schenectady, N. Y.; Preston M. Hickey, Detroit; Henry K. Pancoast, Philadelphia; George W. Holmes, Boston; J. S. Shearer, Ithaca, N. Y.; or the secretary, Miss Doris Keeler, Rockefeller Hall, Ithaca, N. Y.

CORRESPONDENCE

MISSING

DR. WILLIAM RAY ELY, a physician, disappeared from Chicago, Illinois, in October, 1912. He graduated at the College of Physicians and Surgeons, Chicago, Illinois, in 1909, practiced medicine, and made his home in Gibson City, Illinois. He was born in Mazon, Illinois, in 1879, and is now about 42 years of age.

Height 5 feet 9 inches, dark complexion, brown hair and brown eyes.

He left a wife and four children, and his family has not heard from him since his disappearance.

The undersigned will appreciate any information concerning Dr. Ely which may lead to his location and identification, and will be glad to treat communications in reference thereto as strictly confidential.

DAYTON & BAILEY,
Attorneys and Counselors at Law,
84 William Street, New York City.

ANNUAL SESSION OF AMERICAN HOSPITAL ASSOCIATION

LAFAYETTE, INDIANA, July 18, 1921.

To the Medical Profession of Indiana:

The American Hospital Association has done Indiana the honor of selecting West Baden for its annual meeting, September 12th to 16th, this year. This meeting should be of particular interest to all practitioners for we all have more or less use for the hospital, and especially to the physicians and surgeons who are staff members of these hospitals. We simply cannot do without hospitals and their appointments. Hence our interest in hospital development ought to be paramount. It is estimated that of the 150,000 physicians in this country, 60,000 are on the staffs of these hospitals in some capacity.

The exhibit of hospital equipment and conveniences at this annual meeting will be of unusual value and interest, and well worth the trouble of attending the meeting. The papers to be read promise to be of unusual excellence.

The new Indiana Hospital Association, composed of staff members as well as executives, will act as host for the occasion. Therefore, may I call particular attention to this meeting and urge physicians and surgeons in general, and staff members in particular, to take a few days off and attend the meeting of the American Hospital Association at West Baden, September 12th to 16th.

Fraternally,
GEORGE F. KEIPER, President,
Indiana Hospital Association.

Investigation by the U. S. Public Health Service show that practically all bottle-fed babies thrive as well on powdered milk as they do on natural cow's milk; and that some who do not thrive on the cow's natural milk do finely on the powdered. The National Commission on Milk Standards urges health and food-control officials to encourage and not to hamper the dried milk industry.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	87
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	24
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Sliders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	27
15.	Washington	Irvin Huckleberr	5	13
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19
18.	Allen	Miles F. Porter, Jr	95	105
19.	Greene	W. R. Cravens	16	18
20.	Henry	C. E. Canaday	25	29
21.	Switzerland	R. M. Copeland	7	8
22.	Fulton	A. E. Stinson	15	17

INDIANA STATE MEDICAL ASSOCIATION

The Program Committee has announced the following list of papers for the annual session of the Indiana State Medical Association, to be held at Indianapolis, September 28, 29, and 30, 1921:

1. President's Address.
2. Symposium: Ulcer of the Stomach and Duodenum.
   (a) Etiology and Pathology, B. W. Rhamy, Fort Wayne
   (b) Diagnosis and Medical Treatment, W. H. Foreman, Indianapolis
   (c) Indications for Surgical Treatment, T. B. Noble, Indianapolis
   (d) Surgical Technique (Lantern Slides), J. R. Eastman, Indianapolis
   Discussants:
   Miles F. Porter.....Fort Wayne
   A. B. Graham.....Indianapolis
   W. D. Asbury.....Terre Haute
   E. D. Clark.....Indianapolis
3. Treatment of Chronic Nephritis, Chas. P. Emerson, Indianapolis
   Discussants:
   G. W. McCaskey.....Fort Wayne
   E. F. Kiser.....Indianapolis
4. Operative Injuries to the Gall Ducts: Causation and Repair—Slides, H. K. Bonn, Indianapolis
   Discussants:
   H. O. Shafer.....Rochester
   Goethe Link.....Indianapolis
5. Cecal Tuberculosis—Slides, W. H. Baker, South Bend; M. W. Lyon, Jr., South Bend
   Discussants:
   Vance A. Funk.....Vincennes
   J. H. Eberwein.....Indianapolis
6. Local Anesthesia as a Supplement to General Narcosis.....M. N. Hadley, Indianapolis
   Discussants:
   A. C. Arnett.....Lafayette
   Frank Armstrong.....Danville
7. Conclusions from My Experience in Appendicitis.....James Y. Welborn, Evansville
   Discussants:
   H. W. McDonald.....Newcastle
   G. D. Scott.....Sullivan
8. Notes on the Treatment of Septic Infection Following Delivery or Abortion, A. S. Jaeger, Indianapolis
   Discussants:
   Jos. H. Weinstein.....Terre Haute
   Frank S. Holland.....Bloomington
9. Non-Tuberculous Infection of the Kidney—Slides.....P. E. McCown, Indianapolis
   Discussants:
   Chas. E. Barnett.....Fort Wayne
   Bernard Erdman.....Indianapolis
10. Cystica Fibrosa.....J. H. Oliver, Indianapolis; V. H. Moon, Indianapolis
    Discussants:
    Chas. M. Mix.....Muncie
    Frank B. Wynn.....Indianapolis
11. The Treatment of Cancer of the Uterine Cervix.....Stanley A. Clark, South Bend
    Discussants:
    Grace Line Homan.....LaPorte
    George Kohlstadt.....Indianapolis
12. Some Notes on the Surgery of the Mandible—Slides.....W. D. Gatch, Indianapolis
    Discussants:
    W. R. Davidson.....Evansville
    J. C. Sexton.....Rushville
13. The Treatment of Club Feet, H. R. Allen, Indianapolis
    Discussants:
    M. I. Rosenthal.....Fort Wayne
    G. D. Marshall.....Kokomo
14. Sterility in the Female, G. B. Jackson, Indianapolis
    Discussants:
    Arnold Province.....Franklin
    O. G. Pfaff.....Indianapolis
15. The Treatment of Compound Fractures, E. B. Mumford, Indianapolis
    Discussants:
    H. O. Bruggeman.....Fort Wayne
    L. A. Ensminger.....Indianapolis
16. Traumatic Abdominal Injuries, W. U. Kennedy, Newcastle
    Discussants:
    E. C. Davidson.....Lafayette
    W. P. Williams.....Lebanon
17. Some Professional Shortcomings (Chairman's Address—Eye, Ear, Nose and Throat Section).....W. A. Hollis, Hartford City
18. Report of a Case of Bezold's Mastoiditis Preceded by Thirty Years of Middle Ear Suppuration.....C. N. Howard, Warsaw
19. Some Phases of the Trachoma Question, J. N. Stucky, Lexington, Ky.
20. What the General Practitioner Can Do in Otology.....D. O. Kearby, Indianapolis
21. The Clinical Picture of Streptococcic Osteomyelitis of the Temporal Bone, Harry Boyd-Snee, South Bend
22. Ludwig's Angina, Complicating a Case of Suppurative Parotitis. With presentation of a case.....W. F. Molt, Indianapolis
23. Theory and Practice of Immunology, James L. Gilbert, Logansport
    Discussants:
    B. W. Rhamy.....Fort Wayne
    Frank B. Wynn.....Indianapolis
24. Epidemic Encephalitis. W. A. Fankboner, Marion
    Discussants:
    E. O. Daniels.....Marion
    Clay Ball.....Muncie

25. Foreign Bodies Within the Respiratory Tract as Causative Factors in the Production of Pathological Conditions,
Maurice H. Krebs. Huntington

Discussants:
Alfred Henry.....Indianapolis
C. A. Sellers.....Hartford City

26. Eclampsia.....Jane Ketcham, Indianapolis

Discussants:
F. R. Clapp.....South Bend
Chas. S. Bond.....Richmond

27. Functional Nervous Disturbances in Soldiers and Civilians.....Chas. G. Beall, Fort Wayne

Discussants:
W. D. Asbury.....Terre Haute
John Gilpin.....Fort Wayne

28. Some Problems in Syphilis.
R. V. Hoffman, South Bend

Discussants:
A. W. Brayton.....Indianapolis
Wm. S. Ehrich.....Evansville

29. Infections of the Gall Bladder,
John W. Sluss, Indianapolis

Discussants:
W. D. Asbury.....Terre Haute
W. C. Heilman.....Newcastle

30. The Physical Inequality of School Children.
George W. Spohn, Elkhart

Discussants:
Ada E. Schweitzer.....Indianapolis
George W. Cring.....Portland

31. Professional Efficiency in the Hospital.
Chas. S. Woods, Indianapolis

Discussants:
H. G. Hamer.....Indianapolis
A. C. Kimberlin.....Indianapolis

SEVENTH DISTRICT

The Seventh District Medical Society was called to order in the Assembly Room of the Public Library at Franklin at 3 o'clock on July 6 by the president, Dr. Edgar F. Kiser.

Minutes of the previous meeting were read and approved. The report of the secretary-treasurer also was read and accepted. The president appointed the following nominating committee: Drs. T. C. Kennedy, Indianapolis; O. T. Scamahorn, Pittsboro; and J. F. Ragan, Plainfield. Upon the recommendation of this committee, Dr. R. C. Ottinger, of Indianapolis, was elected president, and Dr. B. J. Larkin, also of Indianapolis, was elected secretary-treasurer. The 1922 meeting is to be held in Indianapolis.

Dr. David Ross, president of the Indiana State Medical Association, addressed the Society.

Dr. T. C. Kennedy of Indianapolis presented the first paper on the program, his subject being "The Cancer Problem". Dr. Luke P. V. Williams of Whiteland read a paper on "The Toxicology of Tobacco" which brought forth much discussion. "Diseases of the New Born" were discussed by Dr. Louis H. Segar of Indianapolis; and an interesting report of an Epidemic of Gastro-Enteritis at the Indiana Boys' School was given by Dr. J. S. Ragan, Plainfield. Dr. J. L. Tierney of St. Louis, Mo., gave an illustrated lecture on "Diagnostic Signs of Diseases of the Ductless Glands".

A chicken dinner was served at one of the local cafes.

The evening program consisted of the address of the president, Dr. Edgar F. Kiser, Indianapolis, and a paper on "Recent Surgical Progress" by Dr. William E. Gabe of Indianapolis.

Adjourned. BERNARD J. LARKIN. Sec'y.

TENTH DISTRICT

The Tenth District Medical Society met at Hazeldon, Brook, Indiana, on July 19, at 2 p. m.

The first paper on the program was read by Dr. Peter S. Clark, of Chicago, on "The Diagnosis of Acute Abdominal Infections". The paper of necessity covered a wide range of diseases. The essayist presented the latest in diagnosis of the classical symptoms, paying especial attention to the more common ones. The general discussion which followed brought some differences of opinion as to the treatment of pancreatitis.

The second paper dealt with the subject of Fractures, and was presented by Dr. Dean Lewis of Chicago. Dr. Lewis' discussion of the subject was very practical. He enumerated a few cases of non-union over which there is no control, but thinks failure in the treatment of many fractures is due to failure to study the action of the muscles involved and the shape of the fracture. Description was given in detail of the treatment of a number of the more common fractures, and, in cases of fractures of the arm, much stress was laid upon the importance of examining and making note of the condition of the radial pulse that injuries to the blood vessels may be detected early, thus adding much to the protection of the surgeon. The paper was freely discussed.

The program was so arranged as to give the members opportunity from four to six p. m. for a round of golf, a plunge in the pool, or any other recreation desired. At six o'clock the ladies of the Brook U. B. Church served a chicken dinner, following which Dr. John A. Macdonald of Indianapolis read a paper on the Diagnosis and Treatment of Hyperthyroidism, enumerating all of the delicate points in diagnosis and the various tests to be used. He stated that from 60 to 70 percent of these cases are self-limited, thus accounting for a large percent of the so-called cures. X-ray and rest was advocated for the borderline cases, and surgery for the advanced cases. He urged that food be regulated by the metabolic rate.

Officers for the ensuing year were elected as follows: President, Dr. A. R. Kresler, Rensselaer, and secretary, Dr. O. E. Glick, Kentland.

Attendance, 65. Adjourned.

O. E. GLICK, Secretary.

ELKHART COUNTY

The members of the Elkhart County Medical Society met at The Tavern, Christian Lake, near Elkhart, on July 1, and tendered a banquet to Drs. I. J. Becknell and M. K. Kreider, both of Goshen, in honor of their 75th birthdays. Dr. Becknell and Dr. Kreider have practiced medicine in Elkhart county for fifty years.

Dr. Charles W. Frink acted as toastmaster, and speakers of the evening were Drs. D. L. Miller, Goshen, and I. W. Short of Elkhart. Dr. G. W. Spohn, in the name of the Society, presented a gift to each of the honor guests. Both Dr. Becknell and Dr. Kreider had many reminiscences and stories to relate. Mrs. George Dewey and Mrs. I. J. Markel entertained the Society with musical selections.

S. T. MILLER, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NON-OFFICIAL REMEDIES

ORTHOFORM. — ORTHOFORM NEW. — METHYL META-AMINOPARAOXYBENZOATE.—Orthoform is a local anesthetic which penetrates the tissues very slowly on account of its insolubility. It has no action on the unbroken skin. It is practically non-toxic in the usual doses. Orthoform is used internally to relieve the pain of gastric ulcer. It has been applied locally as an analgesic to wounds of every description. It has been used in dentistry, in nasal catarrh, hay fever, etc. H. A. Metz Laboratories, Inc., New York.

AMIDOPYRINE.—PYRAMIDON.—Amidopyrine is closely related chemically to antipyrine. Amidopyrine acts as an antipyretic and anodyne, like antipyrine, but is effective in smaller doses. The action, while somewhat slower at the beginning, is more lasting. It is claimed to be comparatively free from harmful influences on the blood, heart and kidneys. It is said to be useful in the chronic fevers of tuberculosis, as well as in the acute febrile conditions of typhoid fever, erysipelas and pneumonia. In the treatment of infectious fevers it, like other antipyretics, should be cautiously employed. Dosage: from 0.3 to 0.4 gm.

AMIDOPYRINE-CALCO.—A brand of amidopyrine N. N. R. Calco Chemical Co., Boundbrook, N. J.

MESOTAN.—SALMESTER.—METHYL-OXYMETHYL SALICYLATE.—Mesotan is an active counter irritant, used especially in rheumatic conditions similarly to the local application of methyl salicylate. It is more irritant than the latter and lacks its odor. It is absorbed from the skin, but its action is predominantly local, relieving pain and swelling. It is not an efficient means of producing the systemic actions of salicylates. Winthrop Chemical Co., New York.—(*Jour. A. M. A.*, July 2, 1921, page 41).

ARGYN.—A colloidal compound of silver oxid and serum albumin, containing from 25 to 30 percent of silver. The silver is in a form not readily ionizable. Argyn has the actions and uses of silver protein preparations of the argyrol type (see New and Nonofficial Remedies 1921, p. 330). It is employed in from 10 to 25 percent or stronger "solutions" (colloidal suspension). The Abbott Laboratories, Chicago, Ill.

CASEIN.—CASEINAS.—The protein separated from milk by the action of acids or enzymes and purified. It contains not less than 15 percent of nitrogen, calculated on the moisture free material. Casein is used as a food, being added to other ingredients of the diet when it is desired to increase the content of protein in the diet. This occurs occasionally in the feeding of infants, in the nutrition of adult convalescents and undernourished persons, and in the dietotherapy of diabetes. Casein is also used in the preparation of special foods for diabetics or others for whom a regimen poor in carbohydrate and fat may be desired. When incinerated, casein should not yield more than 2 percent of ash. It should contain not more than 10 percent of moisture and not more than 1 percent of fat.

PAPAVERINE SULPHATE TABLETS-ROCHE.—Each tablet contains 0.04 Gm. papaverine sulphate-Roche (see New and Nonofficial Remedies 1921, p. 211). Hoffmann LaRoche Chemical Works, New York.—(*Jour. A. M. A.*, July 23, 1921, page 287).

PROPAGANDA FOR REFORM

PROCAIN DERMATITIS.—Dermatitis following the use of procain has been reported. The treatment is palliative and includes removal of the etiologic factor.—(*Jour. A. M. A.*, July 30, 1921, p. 395).

A NUXATED VICTORY.—It was Nuxated Iron that enabled Mr. Jess Willard to wrest the championship from Mr. Jack Johnson, and the same marvel made it possible for Mr. William Harrison Dempsey in turn to administer the K. O. to Mr. Willard. It was inevitable, therefore, that the French champion should be defeated by Dempsey in the recent fight. And now newspaper advertisements describe how "Nuxated Iron" helped "Jack" Dempsey to whip Carpentier. One wonders what would have happened had Dempsey taken the "Nuxated Iron" course previous to our entrance into the World War.—(*Jour. A. M. A.*, July 9, 1921, p. 130).

CHAULMOOGRA OIL IN LEPROSY.—There remains little doubt that a potent remedial agent for leprosy resides in some of the fatty acids that can be separated from chaulmoogra oil. The first larger group of successful cases were treated with the mixed ethyl esters of chaulmoogra oil acids carrying 2 percent of iodin in chemical combination. Intramuscular injections were supplemented by oral administration of a similar product. In later series the iodin was omitted without noteworthy difference in the favorable outcome of the treatment, and the oral administration has been discontinued because it gave no added advantage with respect to the results obtained. Two definite constituents of chaulmoogra oil—chaulmoogric acid and hydnocarpic acid—have been separated and employed in the form of esters therapeutically with obvious success.—(*Jour. A. M. A.*, July 23, 1921, p. 292).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the authorities charged with the enforcement of the Food and Drugs Act, because the curative claims made for them were held to be unwarranted: Gonosan (Riedel & Co., Inc.), a sandalwood oil preparation previously reported on by the Council on Pharmacy and Chemistry. C. C. Capsules (Evans Drug Mfg. Co.), containing a mixture of copaiba balsam and cubebs. C. G. Remedy (Allen-Pfeiffer Chemical Co.), essentially a solution of zinc salts, boric acid, eucalyptol, phenol and glycerin and an unidentified plant extractive. Pulmo Oil Compound Emulsion for the lungs (Callahan Chemical Co.), consisting essentially of sperm oil containing a small amount of methyl salicylate and alcohol. A. W. Chase's Nerve Pills (A. W. Chase Medicine Co.), consisting essentially of aloes, iron (ferrous) carbonate, arsenic, manganese and strychnin.—(*Jour. A. M. A.*, July 9, 1921, p. 140).

SPIROCIDE AND THE INHALATION TREATMENT OF SYPHILIS.—Dr. H. N. Cole criticizes the claims made for Spirocide by the Spirocide Corporation. He points out that the inhalation treatment is not new but has been used since 1506 and has been given up by almost every trained syphilographer for many years because of the fact that it is not only irritating to the lungs but also dangerous and of uncertain dosage. Dr. Cole also comments on a card sent out by the Spirocide Corporation which shows a blood smear from a syphilitic patient containing Spirochæta pallida and Spirochæta refringens in rather larger numbers in comparison with the number of red cells shown. He states that it is a well known fact that even in secondary syphilis it is almost impossible to find Spirochæta pallida in the blood smears. In his many years of work with syphilis he has yet to see the blood smear from a case of secondary syphilis in which Spirochæta pallida were found and, he adds, why in such an occasion Spirochæta refringens should be seen only the Spirocide Corporation can explain.—(*Jour. A. M. A.*, July 30, 1921, p. 394).

IRON AND ARSENIC IN ANEMIA.—In an elaborate research at the George William Hooper Foundation for

Medical Research in the University of California Medical School, the possible influence of iron salts and other substances supposedly stimulating regeneration of hemoglobin has been studied under carefully controlled conditions of feeding. The results show that iron in the form of Blaud's Pills is inert when given under controlled conditions in anemia periods under the conditions of the experiments. Ferric citrate and the organic "ovoferrin" gave no better results. Hemoglobin gave somewhat better results, but this effect need not be attributed to the iron in hemoglobin. Arsenic in the form of sodium cacodylate and as solution of potassium arsenite were also found inert. No drug tested compared with suitable dietary factors in securing a rapid regeneration of hemoglobin during anemia periods induced by simple hemorrhage. The results of this investigation give no support to the time honored custom of administering iron in simple anemia. The burden of proof for the value of iron salts (and of arsenic) in anemia now rests with those who claim that a given drug is potent in such conditions.—(*Jour. A. M. A.*, July 30, 1921, p. 379).

QUASSIA COMPOUND TABLETS.—These tablets, marketed by Flint, Eaton & Co., according to the label on the trade package submitted to the Council on Pharmacy and Chemistry, contain in each tablet: Quassia 3-4 grain, chionanthus 1 grain, wahoo 3-4 grain, nux vomica 1-2 grain, cascara 1-3 grain, aloin 1-4 grain, ipecac 1-6 grain, podophyllin 1-4 grain, gingerine q. s. In the advertising "cascara" is replaced by the indefinite term "cascarin" and the "gingerine q. s." by "carminative antigripe q. s." Flint, Eaton & Co. informed the Council that "carminative antigripe" is sodium sulphite. The tablets were treated with dilute hydrochloric acid and the odor of sulphur dioxid became apparent. This shows that the company's statement to the Council that the tablets contain sodium sulphite is correct and that the formula on the label is incorrect. The Council declared Quassia Compound Tablets (Flint, Eaton & Co.) inadmissible to New and Nonofficial Remedies because: 1. They contain drugs of unproved value. 2. Their composition is needlessly complex, and, therefore, irrational. 3. Unwarranted therapeutic claims are made for them. 4. The name is misleading and not descriptive of their composition. 5. The statement of their composition is indefinite and incorrect.—(*Jour. A. M. A.*, July 9, 1921, p. 141).

OXYL-IODIDE NOT ADMITTED TO N. N. R.—Oxyl-Iodide (Eli Lilly & Co.) is said to be the hydroiodid of cinchophen, and the claim is made that it exerts the effects of cinchophen and of iodid. Because of inquiries which had been received, the Council on Pharmacy and Chemistry decided to determine the eligibility of Oxyl-Iodide for New and Nonofficial Remedies. Dr. P. J. Hanzlik—formerly associate professor of pharmacology at Western Reserve University School of Medicine—now professor of pharmacology at Leland Stanford Junior University Medical School, who has made a study of cinchophen and of salicylates, was asked to report on the therapeutic value and the rationality of Oxyl-Iodide. In his report Dr. Hanzlik brought out that the administration of Oxyl-Iodide can have no advantage over the administration of cinchophen and iodid, that in most cases in which cinchophen is indicated iodide is not wanted, and that when the action of both iodide and cinchophen is desired this can be better obtained by the administration of cinchophen and sodium iodide, since it permits the proper regulation of the dose of each. After considering Dr. Hanzlik's report, the Council declared Oxyl-Iodide inadmissible to New and Nonofficial Remedies because it is an irrational combination marketed under claims that are unproved and consequently unwarranted.—(*Jour. A. M. A.*, July 2, 1921, p. 57).

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, because the therapeutic claims made for them were held to be unwarranted: Hobo Kidney and Bladder Remedy (Hobo Medicine Co.), represented as a treatment or cure for Bright's disease, backache, rheumatism, inflammation of the bladder, etc. Anti-Pneumonia (John B. Cox), a tar preparation represented as a cure for bronchitis, acute inflammation and articular rheumatism and suppressed menstruation, and as a remedy for typhoid fever, diphtheria and measles. Gon-Kure (Gem Medicine Co.), consisting of a fluid for injection and tablets for internal use and represented as a remedy for gonorrhea and acute chronic cystitis. Potasul Potash Sulphur Water (Potash Sulphur Springs, Inc.), containing no appreciable amounts of potash and sulphur represented as a cure for diseases of stomach and bladder and kidneys. Short Stop Injection and Short Stop Capsules (Massman Chemical Co.), represented as a cure for gonorrhea and gleet and for leukorrhea, kidney and bladder affections, chronic seminal and mucus discharges. Fisher's Indian Remedy (Anthony Fisher Co.), tablets represented as an effective remedy, treatment, cure and preventive for indigestion, stomach trouble, sick and nervous headache, neuralgia, kidney and liver complaint, etc., etc. Santal Bowne (General Drug Co.), capsules of santal and cassia for the treatment of gonorrhea. Lallemand's Rheumatism, Gout and Neuralgia Treatment (Meyer Bros. Drug Co.), containing potassium iodid and colchicum and other drugs and represented as an effective preventive remedy and cure for acute and chronic rheumatism, neuralgia and locomotor ataxia. Robert J. Pierce's Empress Brand Tansy, Cottonroot, Pennyroyal and Apiol Tablets (Robert J. Pierce Co.), represented as a safe emmenogogue and cure for the suppression of the menstrual function.—(*Jour. A. M. A.*, July 16, 1921, p. 219).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, for the reasons that the therapeutic claims made for them were unwarranted: Nerv-Mintz (Earl Chemical Co.), tablets containing essentially sabal, nux vomica, zinc phosphid, aloin and capsicum. Penslar Sancop Pearls (Penslar Chemical Co.), capsules containing oils and resins, including oil of sandal and cinnamon and copaiba and gurjun balsam. Lezajskie Lecznicze Wino Elixir (Wojtasinski Chemical Co.), a water-alcohol solution containing rhubarb and a trace of cascara. Porose Pills (Lafayette Co.), consisting essentially of ferrous carbonate, nux vomica, a laxative plant drug, arsenic and plant extractives. Gold Medal Compound Pills (Ashland Supply House), consisting essentially of ferrous sulphate, aloes and oil of pennyroyal. Wade's Golden Nervine (Gem Medicine Co.), pills consisting essentially of iron, phosphates, strychnin, damiana and gentian. Allan's Star Brand Pills (Allen-Pfeiffer Chemical Co.), consisting essentially of aloes, ferrous sulphate and starch. Cheeseman's Pills (Dr. Cheeseman's Female Regulating Pills-Kells Co.), composed essentially of aloes and ferrous sulphate. Dr. Gunn's Blood and Nerve Tonic (United Medicine Co.), tablets composed essentially of aloes, phospho-

(Continued on Advertising Page xxxvi)

Treat Hay Fever With Suprarenalin

LABORATORY PRODUCTS

SUPRARENALIN is the remedy in Hay Fever. It may be administerd locally, internally or Hypodermatically.

Locally—Solution and ointment are applied to affected parts.

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Suprarenalin is recommended in Hay Fever in various forms. Herewith are suggestions made by men of authority.

One recommends using solutions of varying strengths from 1:10,000 to 1:1000 made up with normal salt solution. To sustain the relief to some extent, he suggests spraying over the constricted mucous membrane a 5 grain to the ounce solution of menthol in albolene, benzoinol or other light oil.

Another uses Suprarenalin Solution in strengths varying from 1:10,000 to 1:1000, applying these locally to the conjunctiva and nasal membranes. He also suggests the following combinations which are snuffed into the nasal passages or insufflated by means of a nasal blower.

1. Suprarenalin ..... 1 part
   Zinc Stearate (Comp.) ..... 100 parts
   Heavy Magnesium Carbonate ..... 900 parts
   Mix. Triturate well.
2. Suprarenalin ..... 1 part
   Zinc Oxide ..... 100 parts
   Bismuth subcarbonate ..... 400 parts
   Mix. Triturate well.
3. Suprarenal gland substance ..... 1 part
   Zinc Stearate ..... 20 parts
   Zinc Oxide ..... 80 parts
   Mix. Triturate well.
4. Suprarenalin ..... 1 part
   Bismuth subcarbonate ..... 300 parts
   Zinc Oxide ..... 300 parts
   Zinc Stearate ..... 200 parts
   Mix. Triturate well.

A prominent nose and throat specialist recommends:

	gm.		
Cocainae hydrochloridi		15 or ½ grs.	ij ss
Sodii boratis		30 or grs.	v-
Suprarenalin Sol. (1:1000)	4	or dr.	i
Glycerin	2	or dr.	ss-
Aqua Camphorae ad.	30	or oz.	i

M. Sig. Use as a spray to the nose four or five times daily or oftener if needed.

Suprarenalin Solution 1:1000 (Armour) is stable, uniform, non-irritating and is free from chemical preservatives. **Literature to Physicians.**

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BOOK REVIEWS

PSYCHOPATHOLOGY. By Edward J. Kempf, M.D., Clinical Psychiatrist to St. Elizabeth's Hospital (formerly Government Hospital for the Insane), Washington, D. C.; Author of "The Autonomic Functions and the Personality". With eighty-seven illustrations. Cloth, $9.50. St. Louis, C. V. Mosby Company, 1920.

This new work will appeal particularly to those specially interested in questions relating to the personality, in the neuroses and psychoses and the influence of the sexual upon these, and in the principles underlying psychopathology and psychotherapy. This special field of medical psychology is undergoing considerable development now, and in this process a great deal of valuable knowledge is being added almost constantly.

In this new book the author has brought out a vast amount of really interesting and rather important material. It is quite a large volume, containing about 750 pages, yet there is scarcely a page in it that does not give something worth while to the reader. The subject matter dealt with is very different from the mass of medical literature which the average physician usually sees and reads. It would, therefore, be most instructive and profitable for the physician to get hold of a book such as this in order to acquire some new ideas and new information on a subject of medical thought and experience.

KEEN'S SURGERY. Volume VII and Volume VIII and Desk Index Volume. By Surgical Experts. Edited by W. W. Keen, M.D., L.L.D., Hon. F.R.C.S., Eng. and Edin., Emeritus Professor of the Principles of Surgery and Clinical Surgery, Jefferson Medical College, Philadelphia. Octavo of 855 pages, with 359 illustrations, 17 of them in colors. Philadelphia and London: W. B. Saunders Company, 1921. Price $25.00 per set.

These two volumes are worthy additions to Keen's great System of Surgery. In his preface Dr. Keen says: "The first six volumes of this work recorded the progress of Surgery down to 1913. Then came the great war and its remarkable contributions to both the Science and the Art of Surgery. Without a record of that enormous progress this work would have been a torso. Hence, immediately after the Armistice, with the approval of the publishers, I began to assemble a full staff of experts, whose work appears in Volumes VII and VIII."

The reviewer, having been "fed up" on war surgery, started reading Volume VII with a distinct feeling of ennui, but this feeling was speedily replaced by one of enthusiasm—the contributors have not only given a good picture of war surgery but they have shown the application of its lessons to civil practice. Certain chapters are deserving of especial mention. The first chapter is a characteristic one by Adami and it deals with the subject of inflammation. Cannon contributes chapter eleven on traumatic shock; he points out that "the central condition is a low blood pressure due to a diminished volume of circulating blood, that this condition is made worse by cold, that if the pressure falls below a critical level the tissues suffer from a lack of oxygen and that in the state of shock there is a peculiar sensitiveness to ether and chloroform anesthesia." Burton J. Lee is the author of the chapter on the transfusion of blood and its substitutes. He is correct in his unqualified condemnation of the intravenous injection of gum salts; he is also correct in stating that "the citrate method is the one of choice for front-line work, and should be adopted for the entire medical service". Other outstanding chapters are: Gunshot fractures by Blake; orthopedic surgery in civil life by Lovett; military surgery of joints by Pool; military orthopedic surgery by Sir Robert Jones and W. Hey Groves. Chapter eight on the organization and administration of the medical department of the United States navy for war, considering its relative importance, has received far too much space.

Volume VIII is composed of nine hundred and sixty pages with six hundred and fifty-seven illustrations. Most of the forty chapters are written by men of international reputation. C. H. Mayo and his associates contribute six chapters on the surgery of the endocrine glands. Neuhof's chapter on surgery of the head is one of the most valuable in the whole volume. Frazier discusses the surgery of the fifth nerve, he teaches that the treatment of trigeminal neuralgia has been standardized; "for the palliative treatment, alcoholic injections; for permanent relief division of the sensory root". Crile has an excellent chapter on surgery of the abdomen and pelvis, but his statement that "lesions of the large intestine resulted in a higher mortality than lesions of the small intestine" is not true. The original article on appendicitis was by John B. Murphy, while in the present work this topic is discussed by Deaver and Pfeiffer—they call attention to the importance of chronic appendicitis with referred symptoms and, in connection with acute appendicitis, they insist that when the patient is seen comparatively late and gives evidence of being hard hit an immediate operation will often precipitate a fatality. William Mayo and Balfour have a short chapter on the surgery of the gall-bladder and the biliary ducts. The most extensive and, of course, one of the best, chapters in the book is on the surgery of the prostate by Hugh H. Young. Among the other subjects dealt with in this volume are anesthesia in its various aspects and the use of radium and the x-ray.

A desk index of 182 pages accompanies the two volumes.

CHEMICAL PATHOLOGY. Being a Discussion of General Pathology from the Standpoint of the Chemical Processes Involved. By H. Gideon Wells, Ph.D., M.D., Professor of Pathology in the University of Chicago, and in the Rush Medical College, Chicago. Fourth Edition, Revised and Reset. Octavo of 695 pages. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, $7.00 net.

When Wells published the first edition of his book in 1907 the reviewer, in common with many others, felt that any chemical pathology would have a very restricted sale. Wells' work, however, has appealed to a wide circle of readers and is now in its fourth edition. This edition has been subjected to extensive revision. A chapter on deficiency diseases has been added and under this heading Beriberi, Keratomalacia, Nuttritional Dropsy, Scurvy, Pellagra and Rickets are considered. The ever increasing knowledge on the reactions of immunity has made necessary a separate chapter on anaphylaxis and allergy. The author insists that the specificity of an anaphylactic body depends upon the chemical composition of the antigenic protein rather than its biological origin and he states that "I have found it possible to distinguish in the hen's egg five distinctly different antigens, and these correspond to five proteins which have been distinguished by chemical measures". This book must be studied by every physician who is interested in the advances which have been made in the chemistry of disease and diseased structures—it has no rival in any language.

SEP 19 1921

Medical Lib.

INDIANAPOLIS NUMBER

THE JOURNAL

OF THE

Indiana State Medical Association

Owned, Published and Controlled by the Indiana State Medical Association

ISSUED MONTHLY under the Direction of the Council

Volume XIV
Number 9

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Next Annual Session, Indianapolis, September 28, 29, 30, 1921. List of Officers and Committees on Adv. Page 2.
Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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To sum up, the many new methods of investigation, *physical, chemical microscopical,* and *clinical,* have given greater certainty in dealing with obscure pathologic processes. This work *covers them all and gives every needed detail.*

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

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OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XIV SEPTEMBER 15, 1921 NUMBER 9

ORIGINAL ARTICLES

PROTEIN SENSITIZATION*

CHARLES S. BOSENBURY, M.D.
SOUTH BEND, INDIANA

Many individuals are abnormally sensitive to foreign proteins. This peculiar susceptibility has been designated protein sensitization. It is often responsible for bronchial asthma, hay fever, urticaria, eczema, anaphylactic shock and various gastro-intestinal disorders. The skin of an individual sensitized to a protein will show a definite reaction when that protein is brought in contact with even a small scratch. In a disease dependent upon protein sensitization, it is possible to determine the cause, and, by its elimination or withdrawal, to alleviate or cure the condition. Or, by desensitizing the patient, similar results are obtained.

Proteins are widely distributed in Nature. By various routes they are introduced into the body and, in susceptible individuals, there is an abnormal and unusual response, due to protein sensitization. This term includes the phenomena of anaphylaxis, allergy and food idiosyncrasy.

When a guinea pig is injected with the first dose of horse serum no symptoms develop. If, after a few days, a second injection be given, there is a very severe reaction, due to the fact that the first injection sensitized the animal to the serum. This acquired sensitization was termed by Richet "anaphylaxis." Clinically it was found that occasionally a similar reaction follows the injection of antitoxic sera. This is true anaphylaxis, since it depends upon the introduction of foreign protein. In some ways, reactions which have followed the administration of such drugs as quinine, arsphenamine and acetylsalicylic acid, resemble those of anaphylaxis. Very few of the drugs concerned, however, are protein bodies, and anaphylaxis, strictly speaking, is hypersensitiveness to foreign proteins. Hence, it has been suggested that non-protein reactions be designated "anaphylactoid reactions." Some confusion exists with reference to the term "allergy." Originally it referred to artificial sensitization; now it is frequently used to designate natural susceptibility to foreign protein. Richet has lately proposed that the term "alimentary anaphylaxis" be substituted for "food intolerance" or "food idiosyncrasy," because it indicates the true nature of the condition.

The administration of diphtheria and other antitoxic sera may be followed by anaphylactic shock, within a few minutes after the first and only injection of serum. There is restlessness, dyspnea, cyanosis, cardiac weakness and great fall of blood pressure, acute urticaria, and frequently sudden death. Or, a milder group of symptoms, described by von Pirquet and Schick as "serum sickness," may develop, characterized by urticaria, edema and fever, usually coming on eight to ten days after the first injection. There is a difference between experimental and clinical anaphylaxis. In animals it is necessary to render them sensitive by preliminary injection, while in man, anaphylaxis may and usually does occur as a result of natural sensitiveness to horse serum.

There are many clinical types of protein sensitization due to other than serum reactions. They are far more common, being dependent upon proteins derived from food, pollens, animal epidermis and bacteria.

It has been estimated that one in every ten persons is susceptible to one or more proteins. Predisposition to protein sensitization is apparently inherited, as approximately fifty per cent of sensitive individuals give a history of similar susceptibility on the part of one or both parents.

The fact that some individuals are rendered ill or seriously inconvenienced by certain foods has long been realized. "One man's meat may be another's poison." Food intolerance occurs frequently in children. Older patients may be sensitive to foods, but are more often susceptible to other types of proteins. Susceptibility to milk and eggs is very common, but is also shown to meats, fish, cereals and fruits. It is of interest to note that some infants are sensitive to human milk. The symptoms of food

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intolerance vary. Often there is gastro-intestinal disturbance, and this may be associated with asthma, bronchitis, eczema, urticaria, angioneurotic edema or spasmodic croup. Or, the digestive tract may escape, and the symptoms are referrable to the respiratory tract, the skin or nervous system. Generally there is evidence of food idiosyncrasy soon after the ingestion of the offending food but there may be a delay of several days. In very sensitive patients the reactions may be acute and severe, resembling anaphylactic shock. Usually they are milder and more chronic. When a patient shows food intolerance the symptoms are not characteristic of any one food. Milk, wheat or bananas may cause much the same picture. Some hint may be given by a history of eating unusual food. In older patients repeated attacks may have occurred, as illustrated by an annual outbreak of urticaria, due to buckwheat or strawberries. However, the actual cause of intolerance may generally be demonstrated by the cutaneous test.

Hay fever is most frequent in the late summer and early fall months, but may occur at other times of the year in different climates, depending upon the susceptibility of an individual to various pollens. While bacteria may increase the intensity of the disease, or cause a patient to become susceptible to it, hay fever is generally due to pollens, although Walker recently has described what he terms "perennial hay fever," due to other types of proteins.

Asthma may be due to any of the four groups of proteins. As a rule, according to Walker, young asthmatics are sensitive to food proteins. It may be interesting to know that many patients develop asthma under the age of five years, and approximately 85 per cent of these are protein-sensitive. Older patients, while showing food reactions at times, are more commonly susceptible to keratinoid, bacterial and pollen proteins. Wheat is the most common food to cause asthma, then eggs, fish, potato, casein and other foods less frequently. Of the animal emanations, the protein of horse hair is the most frequent cause. Epidermal proteins for cutaneous tests and treatment have been prepared from horse hair, cat hair, chicken feathers, dog hair, goose feathers, mouse hair, rabbit hair and sheep wool. There are about thirty pollen proteins available for tests and treatment: of these, timothy and ragweed give the most frequent reactions. Bacterial proteins may be responsible, as in cases of focal infection. Here bacteria are harmful, not only because of their infectiousness, but also because of their protein elements. Not all cases of asthma are caused by protein sensitization. Many are non-sensitive and such are due to bacterial infection.

Eczema, particularly infantile eczema, is frequently due to protein sensitization. Taking the reported cases of three observers, Talbot, Schloss and Blackfan, who report a total of eighty cases, 49 reacted to eggs, 33 to cow's milk, 13 to human milk, 8 to barley, 9 to horse serum, 9 to meat extract, and to other foods less frequently. Some of the patients showed multiple sensitization.

When protein sensitization is suspected, it becomes necessary to determine the cause. This is done by mean of cutaneous tests with suspected proteins. Purified proteins are supplied in powdered form, or in solution. The powdered proteins are soluble in decinormal sodium hydroxide solution. A control test is made by a small scratch through a drop of the alkali solution. Then in turn similar scratches are made and the powdered proteins are mixed with the alkali solution, so that they may be dissolved and come in contact with the patient's serum. The occurrence of a wheal, at least 0.5 cm in diameter, irregular in outline and surrounded by a reddened areola, constitutes a positive reaction. This usually appears in from five to forty-five minutes. If no wheal develops, the reaction is negative. All doubtful or suspicious reactions should be considered negative and the test repeated. In testing protein reactions one must bear in mind that occasionally a patient may be temporarily in a condition of antianaphylaxis or desensitization, during which time the toxic food may be eaten or contact with other proteins occur, and when a reaction may not be obtained with the skin test. This indicates the necessity of repeated tests in suspected cases. Interference with the tests may occur as a result of marked sensitiveness of the skin, that is, false reactions may be obtained. On the other hand, the clinical evidence may indicate protein sensitization and the skin lack sufficient sensitiveness to give positive results.

The question whether normal individuals would respond to skin tests has been investigated by Baker of Harvard. His studies indicate that the incidence of sensitization of apparently normal children is almost a negligible factor.

The prevention of protein sensitization may be possible. Anaphylaxis following the injection of therapeutic sera is generally dependent upon the protein of horse serum, since that animal is usually employed in producing antitoxin. Individuals sensitive to horse serum are therefore possible subjects for anaphylactic shock. Patients who have asthmatic tendencies, as well as those who have had serum injections ten to twelve days or longer prior to a second injection, should be tested for serum sensitiveness. This may be done with protein powder.

or one may give 0.1 cc of the antitoxic serum subcutaneously and, after an interval of two hours, if no untoward symptoms develop, the full dose may be injected.

Sicard has found that the therapeutic dose of an antiserum may be safely injected into the arm when the circulation is completely shut off for a few minutes.

Efforts to reduce the occurrence of anaphylaxis by refinement and concentration of antisera have not been altogether successful. It has been suggested that it might be well to prepare antitoxins from other animals than the horse for use in patients sensitive to horse serum.

Since many individuals inherit a predisposition to protein sensitization, it is well, in planning the dietary of a child, to do preliminary skin tests, whenever there is a history of hay fever, asthma or eczema in the direct ancestors. It may be possible to discover food peculiarities and thus prevent undesirable and harmful food reactions. Either the food to which the child is sensitive is not prescribed or desensitization may be practiced. The proper study of dietetics, therefore, in health and in disease, depends not only on food values, but at times on food reactions as well.

In individuals susceptible to proteins of pollens and animal emanations, change of residence or avoidance of contact with animals, their feathers or fur, are at times indicated. Bacterial proteins absorbed from focal infections are to be eliminated by proper treatment of such foci.

The active treatment of protein sensitization consists of withdrawal or elimination of the offending protein or desensitization or immunization. Treatment of food idiosyncrasy by eliminating the offending foods is simple, provided the patient is not sensitive to too many. It is important that the food is eliminated not only in a pure state but also as an ingredient of other preparations. This is particularly true of milk and eggs, which are so commonly used in various dishes. Many patients with food intolerance fortunately recover spontaneously. Walker is of the opinion that long continued abstinence from offending protein will automatically desensitize an individual for that protein.

Desensitization may be accomplished by hypodermic injection of increasing doses of the protein to which the patient is sensitive. This form of treatment is particularly applicable to diseases caused by pollens, as in hay fever and asthma. It is not generally practical to desensitize to foods in this manner, because of the difficulty of preparing sterile proteins in a soluble and non-irritating form. However, Weill relates that he has successfully treated 41 patients who showed intolerance to human milk and to cow's milk, by subcutaneous injections of milk, using always the Besredka progressive method, first 0.5 cc., then 2 cc. an hour later, and not until after three hours the full dose of 5 to 10 cc. Human milk he injects raw; cow's milk is injected after boiling twenty minutes.

Immunization by feeding gradually increasing amounts of the offending protein or food until toleration is established has been shown to overcome food intolerance in a number of cases, especially to egg and milk. It has been shown that in some cases, where raw milk was not tolerated, boiled milk or milk powder was compatible.

Non-specific therapy is emphasized by French authors. Pagnicz reviewed the literature on peptone methods and finds that relief is temporary, but recommends that the American method of gradual desensitization is superior. However, the peptone methods are so simple that they encourage further research. No preliminary skin tests are necessary. Small and increasing doses may be administered by mouth, by rectum, subcutaneously and intravenously. In children the pancreatic ferment may also be required, as it seems to be the only one of the digestants which transforms albumin and annuls its anaphylaxis-producing properties. Nathan and Lesne report the successful treatment of egg idiosyncrasy by the daily administration of pancreatic extract. In one case the child took the remedy for two years: the other outgrew the intolerance to egg within a few months. In both cases the effect of the pancreatic extract was apparent for, upon its withdrawal there was a return of intolerance, which disappeared when the remedy was resumed.

Danysz believes that certain symptoms in disease are the result of anaphylaxis induced by bacteria. The focus for the production of bacterial proteins is in the intestines. Hence, by isolating bacteria from the patient's stools he was able to prepare what he terms "entero-antigens." These were administered by mouth and by injection. He reports his experience in 352 cases since 1913 and relates that ninety per cent were cured.

It would appear that the subject of protein sensitization, or anaphylaxis, if that term be preferred, is one of great practical as well as theoretical interest. Investigation of the condition has led to greater accuracy in diagnosis and actual cure or relief of many distressing conditions. It would be interesting if we could explain anaphylaxis. No satisfactory theory has been advanced. Theory may fascinate one, but the ultimate aim of the physician must be to apply whatever may be known for the benefit of his patients. The reports of investigators are encouraging. Within the past few years

much has been accomplished. The subject is comparatively new and will not appeal equally to medical men. There are, it is true, certain limitations. It requires painstaking care in making the tests and applying the treatment. The cost, in time and in money, is an item to be considered. However, there may come a time when added knowledge will lead to simplification of treatment and when the general practitioner may avail himself of definite and reliable means for the relief of the victims of protein sensitization.

DISCUSSION

DR. CHARLES SELLERS, (Hartford City): I want to concur with the Doctor and emphasize the importance of these allergic skin reactions. They are painstaking, it is true, but there is the possibility of their giving us a great deal of information in the care of our patients. One should feel a timidity in attempting to explain their cause. Much work, however, has been done recently in regard to the synthesis of the protein. Progressive medicine tends to show that this synthesis probably resides with the mother cells, especially the spleen and bone marrow. Also the cells of each specialized tissue, muscle, brain, and glands may on occasion synthesize each in its own special type of protein, using the amino-acid as building material.

Each tissue can also on occasion give out antitoxin ferments in response to specific toxins, but as a rule these tissues are shielded by the white and red blood corpuscles from the necessity of performing these functions. The activities of the cytogenic system leading to an increase in the number of blood cells, and the stimulus to the activities of the individual corpuscles and through these to the completed protein assimilation and immunization are all governed in part by harmonic stimuli, these harmones being derived from the glands of internal secretion. If this protein assimilation is incomplete a polypeptoid results which acts as a toxin influencing the chromaffin system, resulting in what is known as anaphylaxis. If we could realize that the chromaffin and adrenal system work in a synergetic manner, we probably could explain protein sensitization.

I think it is important to study the family history of these cases. In 85 per cent of my 25 cases I could demonstrate a very definite history of either a hypersensitiveness to some protein, or a history of some endocrine disturbance such as goitre, acromegalia, obesity, diabetes. I have an asthmatic patient whose family history shows very positive endocrine dyscrasia such as obesity, diabetes and goitre. His asthma came on while in Kentucky. He was 48 years of age at that time. When he came to me he was using about 3 ounces of adrenalin hypodermically each 10 days. I would consider it impossible to get an allergic skin reaction with the constant use of adrenalin. In fact I have used a number of skin tests on him without getting a positive take. This case is unique in that there is but one case reported of Chronic Adrenalism. (Adrenalin in Asthma. A case of Chronic Adrenalism. By George H. Hoxie and H. T. Morris, Kansas City. Vol. 4, No. 1, P. 47.) In this case reported, the attempts made to reduce the adrenalin resulted in most alarming symptoms of impending death. Also it is unique in the fact that they were unable to obtain a reaction with non-specific vaccines (typhoid 50 millions). This would tend to show that anaphylaxis and allergic skin reaction are under the control of the chromaffin system. My patient is improving by the gradual withdrawal of the adrenalin, substituting morphine, and the use of neoarsphenamine, as the blood Wassermann was provoked from a (±) to a (++).

I would predict that if the allergic skin reactions were used and studied more, medicine would be wonderfully revolutionized. I have been wonderfully impressed with their aid in clearing up many cases which otherwise would have remained confusing.

DR. VIRGIL H. MOON (Indianapolis): In the brief time at my disposal it is impossible to attempt a detailed discussion of the character and mechanism of food idiosyncrasies and protein sensitization. One of the most convincing evidences of medical progress is the fact that men in clinical medicine are beginning to pay attention to protein sensitization as a phase of disease production with which they have to deal. Ten or fifteen years ago such subjects were not discussed except by scientists and investigators. Today you have heard a paper which detailed very accurately some of the more common manifestations of protein sensitization. This means that you as practitioners of general medicine are coming to realize the importance of protein sensitization as an explanation, and as a therapeutic means for the treatment of certain asthmatic conditions. You have probably come to understand food idiosyncrasies as set forth in the discussion this morning, but the full significance of protein intoxication in other phases of disease production probably has not been grasped by any of us.

That anaphylactic conditions are due to protein intoxication was discovered rather by accident, but investigators were not slow in pushing investigations on this relationship, and establishing a similar relationship in other groups of conditions. It was found that ordinary bacteria consist largely of protein; staphylococci, streptococci, colon bacilli and so on, consist of approximately 75 percent protein. If

the body has the capacity of becoming sensitized to protein and of reacting very markedly when such protein is introduced, is it not understandable that the body may likewise become sensitized to bacterial protein and become severely intoxicated by bacterial protein elaborated within it? Working in this line Vaughan and others have shown that they can produce in animals any type of fever they choose—the step-like progressive fever of typhoid, the rapid rise and sudden decline of temperature as in pneumonia—any type could be produced at will simply by injecting protein in carefully graded doses. The different types of fever were produced by varying the dosage and the intervals between injections. This was true regardless of the type of protein, whether it be egg albumin, horse serum, or protein of bacterial origin such as the colon bacillus. This experiment among others shows the very close analogy between infectious diseases and protein intoxication.

Furthermore, Vaughan found that, regardless of the type of protein, every protein contains in its chemical structure a toxic nucleus or split product which, when liberated by the chemical cleavage of the entire whole protein molecule, is one of the most potent poisons known. Vaughan believes that this toxic split product is identical in the various proteins. When foreign protein is introduced into the body or is formed by bacterial growth within the body, if there is within the system of the animal an enzyme which is capable of splitting that protein into its component parts or "building stones," one combination of these which is toxic is liberated and at once exercises its toxic effect upon the system. Do you not see then why so many infectious diseases are clinically similar? Why when the symptoms begin they are similar—the malaise, the weakness, the nausea, the rise in temperature, the rapid pulse, the headache and the presence of albumin and other pathological products in the urine? Why at autopsy the organs show similar changes regardless of whether the infecting agent has been pneumococcus, streptococcus, typhoid bacillus or whatever it may have been? If the toxic substance in the protein of the various bacteria is identical it would produce similar clinical symptoms and similar pathological changes in the tissues and organs.

In substantiation of the small amount of protein necessary to produce intoxication it was found that by rather crude chemical cleavage a single gram of casein furnished sufficient toxic split product to cause the death of 800 guinea pigs. It is likely that in the system such cleavage is performed much more accurately than in the test tube. In a sensitized guinea pig .000,000,1 gram of egg albumin has caused death. You probably recall seeing last winter in the Journal of the American Medical Association the report of a physician on the attempted desensitization of an asthmatic patient. This patient was very sensitive to horse protein and the inhalation of the emanations from a horse was sufficient to produce severe asthma. A minute quantity of horse serum rubbed into the skin immediately produced locally a small wheal, and severe respiratory discomfort in the patient. The physician sought to desensitize him by injecting intravenously small doses of horse serum. One minim was selected as the initial desensitizing dose. The introduction of that amount produced immediately a most severe anaphylaxis and inside of an hour the patient was dead. The case was reported fully in order that others might profit by the experience, for which the physician is to be commended. In commenting on this case it was suggested that probably such a result would not have occurred had the serum been introduced subcutaneously rather than intravenously. However that may be, the case shows how small a dose of protein may cause death in a sensitized individual.

Further chemical work is being carried on concerning the character of the toxic split-product to which I have referred. This has been identified by Dr. Abel of Johns Hopkins as histamin. He has found this as a structural part of proteins from various sources, and its introduction into animals produces death with symptoms identical with anaphylactic shock. He finds a similar substance in large amount in the pituitary gland, and suggests that the effect of pituitrin may be due to the presence in it of histamin. If that toxic portion of the protein molecule, which may be histamin, is responsible for the toxic symptoms present in bacterial infection, future research for the advancement of therapeutic medicine is going to be directed at that toxic substance. It is not too much to hope that some means may be found by which that toxic substance in the patient's system may be neutralized or rendered inert. The practical accomplishment of this would far transcend any previous achievement of therapeutic medicine, and we may keep our eyes open for productive research in this direction in the coming years.

SYPHILIS AS A FACTOR IN DEAFNESS*

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Owing to its prevalence, syphilis plays an important part in deafness, more than has been supposed in the past. Syphilographers claim that in the United States there are one in every

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ten persons suffering with syphilis, and otologists in the past claim that 4 percent of those cases having syphilis have some defect with their hearing apparatus. Estimating that there are 110,000,000 people in this country, there are 11,000,000 luetics, and 4 percent of that number gives us 440,000 who have some form of otological condition caused by this disease. This, permit me to say, is not too large an estimate, and I am prone to think is not large enough.

Congenital and hereditary syphilis involving the hearing apparatus occurs more frequently in children than it does in adults. James Kerr Love, a Scotchman, in a work entitled "Diseases of Children in School Children" has the following to say, after making routine examinations of many school children and of syphilitic families: "In a series of 21 families there were 172 pregnancies; 30 miscarriages, or stillborn children, 75 deaths nearly all in the first or second year, 31 deaf or deaf and blind children. In another series of 22 families and 185 pregnancies, there were 40 miscarriages or stillbirths; 25 deaf or deaf and blind children. A study of these family trees points to the following conclusions: (1) Syphilis is an infectious disease, which having entered the blood of the parent is transmitted to the child. (2) Amongst the children it stunts and dwarfs and kills. Many are stillborn, many die within a few months or during the first year, and of those who survive, some become blind, some deaf and some both blind and deaf. (3) The Wassermann nearly always proves positive when the combination of blindness and deafness occurs in the child of syphilitic parents. Occasionally the result is negative. (4) A common cause of death among these syphilitic children is meningitis, and this disease occurs usually during the first or second year." It may be urged that these are cases of acquired deafness; that the deafness does not appear until about school age. Many of these children have meningitis and this in turn is very often the cause of the disease.

The conclusions of Fraser of the Edinburgh Royal Infirmary reports of 1908 are as follows: (1) Inflammatory processes occur in the meninges of children affected by congenital syphilis. (2) Specific interstitial inflammation of the acoustic nerve accompanies this meningitis. (3) The inflammatory process thus spreads to the inner ear, most frequently giving rise to irritation but sometimes to inflammatory exudation. (4) These changes are the same as those which give rise to late specific deafness. (5) Syphilis causes deafness in children and in very young children causes meningitis which affects the acoustic nerve."

Thus we have two men who have been working separately and at different times, arriving practically at the same conclusion relative to the frequency and cause of deafness early in childhood. I think it is safe to say that the internal ear is the portion usually involved in childhood deafness.

Acquired syphilis of the ear is found nearly always in early adult or adult life; all portions of the ear may be attacked by acquired syphilis, the external ear less frequently.

Primary infections of this portion of the ear very rarely occur, but the initial lesion may happen as it would in any other portion of the body if there happened to be an abrasion of the skin and subsequent infection. Secondary affections of the auricle are the same as skin eruptions wherever found. Gummata are very seldom met with in this area, although there may be ulcers and condylomata. Occasionally there may be a gumma of the membrana tympani, but it is very rare.

Syphilis of the middle ear occurs by the way of the eustachian tube, causing a necrosis of the mucous membrane and osseous tissues thereabouts. This produces deafness in that there is an interference with the air conduction apparatus. It is not always easy to make a diagnosis of this particular area, owing to the fact that syphilis apes many other affections of the middle ear. The portion of the ear attacked most frequently in acquired syphilis is the internal ear. The diagnosis of this is frequently quite puzzling and may be overlooked.

There is a feeling that the loss of function is due to a toxin attacking the nerve, and the reason for the frequent rapidity of action may be influenced by the anatomical peculiarity of the nerve, it having no neurilemma. McKenzie has shown that there is an early deposit of spirochetes in the nerve itself, and in the capsule of the labyrinth; the contents of the labyrinth are free of spirochetes. The presence of the spirochete implies an increase of lymphocytes and hence the possibility that the neuritis may exist regardless of toxins. Symptoms of this type of deafness may be enumerated as follows: Sudden deafness, nearly always bi-lateral, is not progressive in character, subjective noises are very intense and continue after deafness has become complete. When there is unilateral deafness the Weber test is to the unaffected side. There may be a complaint of pain, but this is usually due to periosteal growth in the labyrinth. The static labyrinth usually compensates after awhile.

Diagnosis: In deafness due to syphilis in any form the diagnosis depends upon several factors: (1) Stage of the disease. (2) History of the case. (3) Various tests to determine how the ear is functioning. If there is a disturbance of hearing along with the eruption of the skin or with an eye disturbance, it is easy to make a diagnosis of syphilis of auditory

apparatus, but of the many tests to determine syphilis of the internal ear, perhaps the various bone conduction tests are as valuable as any. One of the more recent articles in the *American Journal of Syphilis* entitled "The Diagnostic Value of Lowered Bone Conduction in Syphilis" presents the work of W. H. Gouckman, R. A. Barlow and J. H. Stokes. Their study was made "for the purpose of studying reliability of a test based on the difference in perception of sound by bone conduction as compared with an otherwise normal hearing test as an aid in diagnosing syphilis. The method employed was as follows: Hearing tests were done routinely by the otologist in which he was unaware of the diagnosis, and 100 cases were then selected in which data were sufficiently complete to establish or exclude the presence of syphilis. The technique is as follows: Part 1. Weber test. Part 2. The number of seconds the patient hears a 128 tuning fork as compared with number of seconds it is heard by the operator. The same test is repeated with the 2048 tuning fork. Part 3. The Schwabach test with 256 fork. Part 4. Rinne test.

"In 100 cases findings were compared. Positive bone conduction tests corresponded to positive symptoms and signs of syphilis in 46 percent, when syphilis was actually present in 59 percent, giving the test an efficiency of 78 percent. The negative bone conduction test under the same conditions, corresponded to the clinical absence of syphilis in 41 percent. This gives the negative test an efficiency of 51 percent when ruling out syphilis. The margin of error in the test as a routine diagnostic measure is indicated by the fact that 20 percent of the cases in which bone conduction was reduced sufficiently to justify a suspicion of syphilis, no syphilis could be demonstrated, and in 13 percent of cases in which syphilis was present, the bone conduction test was negative and contributed nothing to the diagnosis. In latent lues the two tests corresponded in 80 percent of the cases."

Conclusions reached by these men were as follows: "(1) The so-called lowered bone conduction test as compared with normal hearing is positive in 78 percent of cases of known syphilis. (2) From the otologic standpoint the test is only of value if a complete hearing test is done. (3) The efficiency of the test varied greatly in the different types of syphilis, being best in late cutaneous syphilis (100 percent), latent syphilis 80 percent, syphilis of the nervous system 80 percent. It had no value in osseous syphilis, and the results in early syphilis were inconclusive. A negative Wassermann with a negative bone conduction test is strong evidence of the absence of syphilis. (4) The test agrees with the positive or negative diagnosis of syphilis in 67 percent and disagrees in 33 percent. (5) The test also was positive in 48.7 percent of cases in whom syphilis could apparently be excluded. (6) It has on the whole, therefore, only a restricted value as a diagnostic aid owing to its high factor of error."

An article entitled "The Static Labyrinth in Syphilis" by J. W. Downing, transactions of the American Otological Society, 1917, has to say: "In a large proportion of cases both divisions of the eighth nerve will be affected. The auditory and static labyrinth should be tested. Patients with acoustic neuritis or syphilis may hear the voice surprisingly well and may not complain of deafness until questioned. The tuning forks, therefore, offer the best means of a correct diagnosis. (1) A shortening of the sound perception by bone conduction out of all proportion to the shortening of the duration of perception by the same fork by air conduction. (2) The retention of good hearing for low forks. (3) The loss of perception or a reduction in duration of perception for sounds of high pitch."

I wish also to report a series of cases which we have been able to examine in our office and of known syphilis in connection with the venereal clinic of the Government at the City Dispensary. We have examined in the past six months 288 cases. In each case a complete functional hearing test was performed, including the following tests: Accoumeter, whisper, spoken voice, low note, high note, Galton whistle, Schwabach test, Weber test, Rinne test. Of these the Schwabach test was given especial attention. This test consists of a comparison of the length of time the patient hears the 256 fork with the length of time the examiner hears it, the examiner's ear being normal. Of the 288 cases examined, 52 patients were syphilitic, that is they either had a positive Wassermann or had clinical symptoms sufficient to make a positive diagnosis of syphilis. Thirty-nine of these cases showed no deafness, while 13 showed deafness of varying degrees. Of the thirteen deaf cases, eleven showed a shortened bone conduction of more than 4 seconds, while two cases showed a positive or increased bone conduction. These two cases in which bone conduction was increased were cases of deafness due to chronic otitis media. Of the 39 cases which showed no deafness, thirty showed a negative Schwabach, or the bone conduction decreased more than 4 seconds; in seven, the bone conduction was decreased less than 4 seconds, and in two cases the bone conduction was increased.

The following gives results in tabulated form:

Syphilitic cases..... 52
Deafness in..... 13
(a) Bone conduction decreased 4 sec. or less..... 0
(b) Bone conduction decreased more than 4 sec..... 11
(c) Bone conduction increased (positive Schwabach)..... 2
No deafness..... 39
(a) Bone conduction decreased 4 sec. or less..... 7
(b) Bone conduction decreased more than 4 sec..... 30
(c) Bone conduction increased (positive Schwabach)..... 2

Purposely, I have refrained from mentioning the static labyrinthine tests, but they are of immense value in the establishment of eighth nerve deafness. The presentation of this phase of lues has been made clear by Barany, Jones and Fisher, McKenzie and our own Heitger. This should be done routinely when there is any suspicion of lues, and I am not so sure but that it should be done in all cases presenting any form of deafness.

It seems fair to arrive at the following conclusions relative to this subject:

1. Syphilis is much more frequently a causative factor than is supposed.
2. Congenital or hereditary syphilitic deafness usually occurs early in life.
3. Acquired luetic deafness is usually found in adult life.
4. It attacks both the receptive and perceptive apparatus, but the latter much more frequently.
5. It usually is bilateral in destruction of hearing.
6. Diagnosis depends largely upon
   (a) Case history.
   (b) Laboratory findings, especially the Wassermann test, both blood and spinal fluid should be made.
7. Bone conduction tests are of important value.
8. Routine examinations of all cases by using all functional tests.

DISCUSSION

DR. C. G. ADAMS (Kokomo): I understood that Dr. McCaskey used the 256 fork in his Schwabach test. I would like to inquire just why he chose that particular fork.

DR. G. W. SPOHN (Elkhart): Every specialist looks at the subject of syphilis from his standpoint, whether he is an aurist or a neurologist. The statistics by the specialist are not generally reliable, because most specialists have their opinions somewhat warped. Writers have said of those who have had syphilis that about one out of ten have defective hearing. Bezold and many authoritative writers have given statistics to show that about one out of fifty who have had syphilis have defective hearing. It is evident that both sides of the controversy cannot be reliable.

The division of syphilitic deafness into inherited and acquired simplifies the subject very much. Congenital deafness is a disease of children, and affects the young from 10 to 15 years of age. It is more frequent in the male than the female. A differential diagnosis should not be so difficult if it is remembered that the congenital deafness almost universally follows interstitial keratitis, and most cases have the notched and pegged teeth, commonly called the Hutchinson teeth. Besides, these patients have some of the clinical symptoms, as the angles of the nose and mouth fissured, coarse hair, shriveled skin, dry skin, ozena, glandular enlargement, especially the pharyngeal glands, anemic, poorly nourished, irregular and poor eaters.

Acquired syphilitic deafness, as has been said by the essayist, is found in adults. Both forms of deafness should have general antisyphilitic treatment. This is about all that can be done for the disease, whether it attacks the auditory or any nerve. My experience in syphilitic deafness has not been so discouraging as that of Dr. McCaskey—perhaps my cases were mild in character. Because a case is "hard of hearing" and has had syphilis does not say that his deafness is syphilitic. It may be due to a nasal trouble, to a catarrhal condition of the eustachian tubes, or to some middle ear trouble.

I make it a rule to differentiate between the internal, middle, and external ear troubles by the methods given by the essayist. If the case has had syphilis and the labyrinth is involved, then my prognosis is guarded, other conditions being eliminated. But most cases of deafness are due to an infection of the tubes and middle ear.

It has been demonstrated that it requires from three to four years' treatment to put a patient in good condition, or to secure a negative Wassermann. Add to this two years, or make it six years, of careful treatment, both general and local, and usually the inroad to the auditory nerve can be stopped; but the degeneration or the interstitial conditions cannot be relieved. It is a positive understanding that a nerve once destroyed by a syphilitic or other infection can never be rebuilt, or its function re-established.

As to syphilitic meningitis, my experience in this class of deafness is meager. But all writers upon this subject are not of the same opinion. It seems to me that as a meningitis is due to an infection and generally a mixed infection, the inflammation of the meninges would be caused by some catarrhal condition of the middle

ear extended from the tubes and pharynx, the suppuration of the middle ear being extended to the meninges. This can and does happen in cases having syphilis, and some who do not have the disease. I can see how the patient can have his vitality and resistive power lowered by the syphilitic infection, but would this be the primary cause of the meningitis?

In all cases of deafness, it seems to me the aurist should treat the infection of the nares, tubes and middle ear. All parts should be made as near normal as possible. If there is a constitutional infection, as syphilis or tuberculosis, it should be treated accordingly. I have operated a number of cases where the deafness was not relieved. I may be wrong in my inference, but I have concluded that when I had no results or poor results from my operative work, the cases were infected with syphilis. With antisyphilitic treatment and good constitutional treatment the cases usually did well.

When syphilitic deafness has involved the labyrinth no one expects to give relief; but there was a time when that case did not have the involvement of the labyrinth, and good treatment continued would have given relief.

Aurists usually have poor success in the treatment of syphilitic deafness because the patients do not continue the treatment. The fault lies in the patient, not in the physician. When I am certain that the etiology of deafness is due to syphilis, the patient or some controlling member of the family is informed of the cause, the prognosis and the time necessary for treatment. In this way patients usually remain with a physician long enough to get results. There is no need of a physician getting discouraged, or giving an unfavorable prognosis. The condition exists, and every patient or some member of the family should know what the disease means and what to do in the future as protection to himself and future generations.

DR. ALBERT E. BULSON, JR. (Fort Wayne): I haven't much faith in lowered bone conduction as a diagnostic feature of syphilitic deafness, as it is found in diseases of the sound perceiving apparauts when syphilis is not present. The diagnosis of syphilitic deafness will depend more on general clinical manifestations and blood and spinal fluid findings. While I am a firm believer in anti-syphilitic treatment of deafness in the syphilitic, yet I have little faith in securing benefit to the hearing in congenital syphilis. I have seen marked deafness follow syphilitic interstitial keratitis after energetic antisyphilitic treatment, and noted that it did not respond to a continuation of intensive anti-syphilitic treatment. On the other hand, I have seen some almost miraculous results from treatment of deafness in acquired syphilis. However, in the latter class of cases, the treatment to be most beneficial must begin early. The plea for functional tests is well made. There are too many men who begin inflation and neglect to diagnose their cases.

DR. W. S. TOMLIN (Indianapolis): Dr. McCaskey has quoted considerably from a paper which I read, "The Diagnostic Value of Lowered Bone Conduction in Syphilis". I am very much inclined to question any real value in that sign. Of course we know that in congenital syphilis you have disease of the auditory nerve itself and some destruction of the nerve itself. I remember seeing experiments in one of the large pathological laboratories abroad, with a view of determining the condition of the auditory nerve in congenital deafness, and it was quite uniform that there was destruction of the auditory nerve, usually complete destruction, and so far removed from the labyrinth that both functions were affected alike, the static and the auditory. In the acquired syphilitic condition, the auditory branch being so much more delicate than the static branch, it is involved much more frequently.

As to the outlook for such cases of acquired syphilis in beginning deafness, my experience has been that it is very good indeed. I have seen but few cases of severely damaged hearing where the antisyphilitic treatment was begun early.

DR. HARRY BOYD-SNEE (South Bend): I take it that the essayist has clearly established his diagnosis as syphilitic otitis interna. I did not hear him call attention to differential diagnosis, and I would especially like to hear him discuss the differential points which will exclude otosclerosis.

DR. G. H. MUNDT (Chicago): The Doctor brought up the subject of the subjective tests of hearing. The man is negligent, to say the least, who starts to treat a patient who has a deafness when he does not know definitely where that deafness is located, and it is surprising to me how frequently men begin to use inflations of the middle ear and other things when they have never made any subjective test of hearing.

If you are going to get results in syphilis of the internal ear, you must make a diagnosis, and must make it at once and then get busy. The man who waits until next week to make a diagnosis is going to lose just that much hearing. When a patient becomes rather suddenly deaf in one or both—usually in both—ears, if you locate the lesion in the apparatus of perception the thing to do is not to fool around with a blood Wassermann, but take a spinal fluid Wassermann. Patients with syphilitic internal ears, and who have negative bloods, will have positive spinal fluids.

DR. C. H. MCCASKEY (closing): The purpose in presenting this subject is two-fold: First, to bring out the point that the men who are treating these cases of syphilis, *i. e.*, the syphilographer and the general practitioner, owe it to their patients to have a functional ear test made. Heretofore those cases have gone on under treatment, or have disappeared from the person who is treating them, and then show up in some otologist's office when it is too late, with a deafness, and expect relief; whereas if their ear condition had been noticed and diagnosed at the proper time, and the importance of the thing laid before them, they would perhaps have been a little more consistent in following out the treatment prescribed. So one point in this paper is the importance of routine functional ear examinations of a great many syphilitics.

The other point is this: I would urge upon every member of this section that in all cases coming into your office complaining of any ear condition, you make a thorough and complete otological examination of that patient as a routine measure. Even in cases where patients do not complain of ear conditions it is well to make a functional hearing test. If you do that you certainly will not overlook a good many of these cases of deafness.

But in reply to what has been said: I am prone to believe that the safety of your hearing apparatus, especially your perception apparatus, lies in an early diagnosis of the condition. As one discussant said, the longer the time from the acquisition of syphilis, the more danger to the hearing apparatus.

I was asked the reason for using the 256 fork. That was just a matter of following out what is commonly known as the Schwabach test.

Reference was made to treatment of congenital deafness. When you have cases of congenital deafness there isn't much chance that treatment will do these cases any particular good; but in acquired cases early treatment is indicated. Delay is dangerous.

I was asked to differentiate between syphilitic labyrinthitis and otosclerosis. I did not go into the subject of differential diagnosis. The exclusion of otosclerosis, however, would be based on your Schwabach test and other functional tests. In otosclerosis we have Bezold's triad symptom-complex, (a) loss of hearing for the lower musical tones, (b) prolonged period of hearing by bone conduction, and (c) a negative Rinne. In otosclerosis the Schwabach test is positive. In syphilis, as we have shown in our paper, the Schwabach test is negative, *i. e.*, bone conduction is reduced. In establishing deafness of the ear we were interested only in proving that the statistics relative to syphilis were about as mentioned.

It does not make any difference in syphilitic deafness whether the nasal cavity or the pharynx or what part of the nasal cavity is involved; if you don't make a diagnosis of syphilis you are not likely to do your patient any good by any other method of procedure, because when you get through he still remains deaf, and he will go from you to some other doctor, and from him to another, until finally someone has made a diagnosis of syphilis and then given him the prognosis that goes with it.

Just a word about statistics. Statistics do vary with the various operators and the various students of any particular phase of medicine. But when you get a compilation of statistics from a great number of people and the sum total is about a certain percent, then you may be reasonably sure that your statistics are of some value. To go off on a tangent and say that some man says 47 percent for deafness, and some other another percentage, is not the correct way. But when you take a great number of men who have studied the matter, have arrived at conclusions, and have summed up their figures, we will get say four or five percent. Bagby in his chapter on syphilitic deafness, and Hazen in his work on syphilis arrive at the conclusion of about five percent. Hazen's work was published in 1919, and was about the latest work that I could find on the subject.

In conclusion, I wish to urge upon you as otologists the routine examination of all cases that come into your office.

CHOLECYSTITIS*

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This is a subject upon which there has been much discussion, great differences of opinion among the authorities, and a vast amount of literature has been brought into existence in order to bring before the medical and surgical professions the import of this common abdominal condition and the far-reaching mischief it is capable of producing.

All workers, writers and investigators recognize the great part the gall-bladder and its ducts play in the varied and complicated pathology of the upper abdomen. So constantly pregnant with varied degrees of trouble is this field, and so widespread in its extended pathology into other fields of the abdomen, together with the broad scope in which it may show its authority in the life time of the individual, that such men as Deaver, Crile, C. H. Mayo and many others of our best authorities have come to conclude that the gall-bladder and its ducts are the most

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important of all the abdominal organs as they relate to the medical and surgical fraternities.

For the above reasons might we not, for a brief period, discuss again this old familiar story of the gall-bladder and, perhaps during the discussion which the author hopes will follow these brief statements and conclusions, there may be brought out a new thought or two, or some of the old opinions made clearer and more interesting, and thus some little good may come to doctor, surgeon and suffering humanity alike. If this small benefit can be accomplished, the review of this old tale of cholecystitis and its train of devastating ravages may prove to be a blessing much appreciated by someone who now reposes in your best judgment his confidence, his trust, his life—at least I can safely say—his future health.

The reason for this last statement is my personal experience with quite a number of these cases in which I am thoroughly convinced, from the standpoint of a medical adviser, that if you drain or cause to be drained a gall-bladder which should have been removed you will have abundant reason to regret this procedure. Especially is this true if you have the very common catalog of adhesions and long train of complaints from the uncured patient which finally forces upon you the humiliation of reoperation for the relief of the original symptoms.

In case of disease of the gall-bladder your patient will have reduced capacity of this organ and he will be conscious, to some extent, of its contractions and expansions, as evidenced by the painful crampings. Pain, associated with gall-bladder disease, has been too frequently attributed to stones, and in many medical minds the two have never been disassociated. However, the fact is conceded by all observers that fully one-fourth of the cases of cholecystitis are not accompanied with stones, but that the pain is the result of obstruction from large masses of mucus and thickened bile, and this latter condition is the sole cause of the well known so-called disorders of the stomach familiarly classed as indigestion for which nearly all cases of cholecystitis have been treated at some time during their early history. This is not to infer, however, that the severe climaxes of pain requiring the administration of morphia are not due to impacted stones.

In 1914 Rosenow demonstrated that the streptococci was the germ most frequently found in cholecystitis, and supplementing this work Brown later teaches that by making cultures of the emulsified tissues of infected gall-bladders and injecting into other animals the emulsion containing the streptococci in predominance, a strong elective affinity is noticed for the gall-bladders of such animals, and also states that the same strain from the tonsil indicates that cholecystitis may frequently result from a focal infection borne by the blood stream.

My experience in several tabulated cases leads me to conclude that in an adult where pain in the upper abdomen is preceded by vomiting, you are warranted in thinking of gall-bladder disease, while if the pain is the initial symptom and followed with vomiting I am in the habit of thinking first of appendicitis. In the early history of gall-bladder inflammation we are most sure to find a rather typical and constant train of symptoms, namely, indigestion, slight discomfort after eating, not severe pain, but described by the patient as discomfort, fullness as if a heavy weight were in the stomach, which shifts either to the right costal margin or to the back, eructations of gas, nausea, frequently followed by vomiting.

A severe acute attack may be readily recognized by sudden pain, preceded or followed by nausea, vomiting, which when severe, produces marked prostration, and generally, in this state, you can determine some enlargement in the gall-bladder region. When the vomiting persists you can almost be assured that the inflammation has extended into other regions resulting frequently in peritonitis. In the case of the latter, tenderness is very marked and although diffuse at first, soon localizes itself in the vicinity of the gall-bladder.

For a number of years I was depending upon jaundice as one of the important symptoms diagnostic of gall-bladder disease. Experience has taught me, however, that jaundice is not even a symptom in an uncomplicated case of cholecystitis. This symptom only occurs where the inflammatory process has spread into the common duct or into the hepatic or smaller ducts, causing obstruction of an inflammatory nature. The reason for calling especial attention to this point is because I had so depended upon jaundice and because I think it has been so commonly associated with cholecystitis by the large majority of medical men.

Most writers recognize the difficulty of readily diagnosing cholecystitis, and many operators of wide renown admit that this is the true status, even with the abdomen open and the gall-bladder under the direct observation of the eye and the sense of touch.

Every earnest, conscientious, thinking doctor or surgeon of today recognizes the vast importance of a thorough and an early understanding of the conditions which exist within the right upper abdomen of his sick patients, and thanks to the splendid teaching of our efficient surgical fraternity, we medical men are coming closer and closer to the surgical way of early intervention in treating the pathology which experience has abundantly shown can be removed in no other way except by the applied surgical art.

In late years it has been my practice to advise operative treatment in all my cholecystic cases which do not respond to medical treatment within a very reasonable time. I believe this to be the only just procedure to both patient and surgeon. The ill effects of delay in cholecystic disease are numerous, and extending as they do into the liver, the ducts, the pancreas, the bowel and the peritoneum, I conclude that medical measures alone are not to be relied upon in many cases of inflammation of the gall-bladder except perhaps in the simple forms of the catarrhal types. From my personal experience with a goodly number of cases of gall-bladder inflammation I am better satisfied if I can have a good clean surgical procedure instituted immediately on my diagnosis of cholecystitis.

There are few conditions arising in the pathology of the whole abdomen which are capable of more treachery than the gall-bladder inflammations, and I would except only the appendix. Personally I like to have my gall-bladders drained or otherwise taken care of before the inflammation invades the walls of the viscus, if possible.

A good many years ago that great teacher, Moynihan, taught us the cardinal symptoms by which we might arrive at a diagnosis in this condition almost in its incipiency. He showed that the very first symptoms are referred and complained of, not in the gall-bladder or its ducts, nor even in the liver, but in the stomach. It was he who taught the import of weight or distress after eating, which we now designate as epigastric fullness, which, for a time, is relieved by soda or by belching and especially a little later by vomiting. There is a peculiar association as regards foods, namely, greasy foods and some raw fruits, as apples, frequently initiate the so-called indigestion. This is frequently accommodated by the patient loosening the clothing or varying the position of the body. This may not relieve, then we can expect the old familiar heart-burn, gas and acid fluid with increased discomfort leading to a more severe pain localizing in the right costal margin. Slight to copious bile vomitus is frequent, which is especially common as the attacks increase in severity and frequency, which alas, they nearly always do. In this stage, the pain which now has become controllable only by morphia, radiates backward and quite commonly engages the right shoulder and occasionally extends down the right arm.

Jaundice, as stated above, does not occur at this time, but if this symptom should occur a few days later and progresses to a marked degree, rest assured that something unpleasant has happened beyond the vale of our old friend the gall-bladder. Often a chill or two with profuse sweats accompanies the foregoing category to cheer the suffering patient and otherwise enlighten the medical attendant. Complete obstruction may occur at any time when in this stage and such condition may be either from impacted stones or from large balls of thick mucus and infected bile, or from swelling of the mucosa alone. In my humble sight this class of cases is especially needful and favorable for operation.

In the practice of medicine I am thankful for one thing especially, and that is I am learning more and more where medicine should cease and where surgery should institute, and please let me insist at this point that I am not advertising for any special wielder of the knife, nor am I a profound advocate of surgery for every belly pain, but I am glad to be reaching the point where the surgeon is my bosom friend and counselor, much to the happiness and well being of both myself and my patients.

There is no condition within the realms of medicine and surgery where a close relationship and correlation of knowledge and judgment between doctor and surgeon should exist more profoundly to the ultimate benefit of all concerned than in this oft repeated story of cholecystitis. I have recently had abundant experience medically and in cooperation with the surgeon to warrant the above statement.

My constant endeavor, where cholecystitis is probable, is to arrive at as early diagnosis as possible for delay in this regard is dangerous to say the least, for sooner or later a stone or stones will find lodgment in the common duct and result in either acute or chronic obstruction of this channel.

All agree that common duct obstruction in conjunction with acute cholecystitis is much more treacherous than simple cholecystitis. This adds greatly to the difficulty of operation, also detracts in like measure from the patient's welfare. In this condition too one must not overlook the possible, yea very probable, danger thus engendered to the head of the pancreas, which latter is capable of fat necrosis, or finally to diabetes of the pancreatic type. For this reason, if for no other, I wish to emphasize the importance not only of early and correct diagnosis, but equally early proper treatment which can, in the vast majority of instances, be administered only by surgery.

The danger to the patient in cholecystitis through operation rises directly in keeping with the complications. Deaver states that in acute cholecystitis the "operative mortality ranges from 2 percent to 4 percent; when complicated with common duct obstruction, it rises to 5 percent; and with pancreatic involvement, it reaches 9 percent".

After the vast amount of time and work spent on study and investigation, together with the

thousands of operations on the gall-bladder and its appendages, it would appear that the last word had been said as regards the pathology of this region, and that the method of treatment, either medical or surgical, would now be settled forever.

To say the most, medical treatment of this condition has been only fairly successful, and we all have experienced with chagrin the very unpleasant knowledge of the complications resultant from delay and prolonged medical treatment.

Cholecystitis is perhaps the most common cause of the so-called indigestion, and is most certainly the most frequent of the infections with which we have to deal in the upper abdomen. It is most frequently diagnosed in middle life, but this is not to infer that it does not occur earlier.

I have recently had a case operated at 18 years of age, and the idea of Deaver in which he stated some years ago of "Fat, Fair and Forty, Gallstones," has been abundantly found to have set the mark as to age plenty high, yet it bears out the well grounded belief and teaching of many that cholecystitis and gall stones are possessions belonging to middle life.

I believe that it is now quite conceded that a gall-bladder once infected usually remains so in spite of all medical treatment, and its only recovery is through cholecystectomy or by becoming eventually an atrophied, inactive organ. In either one of these instances the function of the gall-bladder is lost, and it is interesting to bear this in mind when asked by a patient how he can get on if he have his gall-bladder removed, pointing out to him that many individuals are walking the earth with perfectly functionless gall-bladders. There are instances where this is reassuring to a hesitating patient.

In discussing the treatment of cholecystitis it might not be amiss to consider briefly the function of the gall-bladder, inasmuch as I have already indicated that to my mind the treatment must nearly always conclude if not institute with surgery.

Physiologists are disagreed on the subject and as yet its function is not satisfactorily determined. It is quite frequently defined as a bile reservoir, which theory is questioned by some on account of its small size. This would seem at least doubtful when we consider the normal output in 24 hours of some 50 ounces of bile. Deaver and C. H. Mayo believe that the gall-bladder is a tension bulb, which by its elastic contractions accommodates the fluctuations of pressure in the ducts and thus spares the liver injury from backward pressure. The physiologists contend, however, that the bile is collected in the gall-bladder where it is mixed with mucus which Flexner has indicated makes the bile very much less irritating to the pancreas.

It has been abundantly proven that man can and does exist rather comfortably without a gall-bladder. This fact lends encouragement to the method of treatment. From my study of my own cases in conjunction with the surgeon and watching the results of treatment of numerous cases, I feel that a cholecystic gall-bladder should either be ectomized or drained according to the condition of the patient, the length of time the infection has been in progress and the complicating pathology.

In cases where the infection is of long standing, gall-bladder much thickened in its walls; pus in the gall-bladder; occlusion of ducts by scar tissue or adhesions; or occlusion of cystic duct by a stone or stones; or where the gall-bladder is very large, filled with thick mucus, and the patient otherwise in fair condition, I would strongly advise excision of the gall-bladder.

But on the other hand, in the presence of other precarious disease; extreme obesity, of which I have just had a case; gangrenous gall-bladder, very difficult of excision; active stone formation; very acute infection; and in cases of extreme age, senility; much involvement of the head of the pancreas; and, finally, in the simplest forms of non-infected gall-stone colic, I think drainage only is at present the wisest procedure for the welfare of the patient.

CONCLUSIONS

Cholecystitis is undoubtedly of infectious origin, the infection being bountifully demonstrated in the tissues of the wall of the gall-bladder.

The most frequently demonstrated bacteria is the streptococci.

Cholecystitis is the most common, and, together with its complications, is the most productive of trouble of all the infections of the upper abdomen.

The etiological premise may be focal and located in the mouth or tonsil.

The function of the gall-bladder is as yet questioned, but it is a well established fact that man can live quite comfortably without a gall-bladder, and it has been frequently noted that through long continued disease and resultant atrophy he has survived with a perfectly non-functionating gall-bladder.

Medical treatment alone is insufficient and ineffective except in the simple catarrhal types.

Early diagnosis and early surgical procedure offer the greatest hope of relief and cure.

Cholecystectomy and cholecystostomy are the operations of choice and each takes its place according to the condition of the patient and the pathology encountered.

DISCUSSION

DR. B. P. WEAVER (Fort Wayne): No apology is necessary by the essayist for bringing before this society a subject so poignant and in a way so interesting. There is probably no topography of the human anatomy so pregnant with diagnostic problems and clinical possibilities as the right upper abdominal quadrant, it being the site of at least five anatomical organs, or parts thereof, and most of them rather closely related from a physiologic point of view.

From an etiologic standpoint, the fascinating work of Rosenow has been referred to by the writer. His results concerning the predilection for certain types of the streptococcus to attack the gall-bladder were later substantiated by Brown—and this very happily, since Rosenow's conclusions and inoculation results were so startling as not to meet with the universal acceptance that they would seem to have merited. There remains then only the necessity of recalling the frequency with which the typhoid bacillus attacks the gall-bladder, and the obstinacy with which it retains its residence within that organ, as instanced by the now famous "typhoid Mary".

The very multiplicity of clinical possibilities is very probably largely responsible for the difficulty oft times encountered in making an absolutely accurate differential diagnosis of disease of the gall-bladder. And the great frequency with which dual lesions are simultaneously encountered in the gall-bladder and appendix, or duodenum and gall-bladder, or the not uncommon association of gastric ulcer with chronic infection of the appendix and gall-bladder, makes one feel this diagnostic responsibility the more keenly when he refuses to incriminate this organ in an existing pathology of the right upper quadrant. And this the more so when he realizes the extreme difficulty of passing the correct verdict oftentimes with the belly open and the opportunity for careful inspection and palpation. No careful abdominal surgeon today is willing to go on record as to the pathology of a gall-bladder by inspection, even with the gall-bladder opened, much less by palpation of the unopened viscus. Nor will he conclude necessarily that a gall-bladder which does not empty by pressure in what seems the normal time, is diseased, and that one which does so empty is not diseased.

Waiting for jaundice to appear as a symptom of cholecystitis is about like waiting for tubercle bacilli to appear in the sputum before making the diagnosis of pulmonary tuberculosis. Both mean that the disease is "out of bounds"—to use a football expression—and has gone beyond its legitimate restrictions.

If the pain-vomiting sequence observed by the essayist is sufficiently constant to warrant its acceptance as a differentiating factor, I am not aware of it but shall gladly pay attention to this point in future observations.

Whether actual stones are present in an infected gall-bladder is a matter of relatively small importance, so that failure to demonstrate a gall-stone shadow by the x-ray should have little weight toward excluding a suspected pathology in this organ. The value of positive findings in cholelithiasis is self-evident. The indirect roentgenologic findings by means of carefully made series of gastro-intestinal plates and fluoroscopic examinations are of distinct value by virtue of demonstrating evidence of pericholecystitis, etc.

An interesting problem for differential diagnosis is sometimes offered by those patients past middle life who by virtue of an abdominal angina, probably dependent upon sclerotic changes in the celiac axis, present an acute syndrome so like gall-bladder colic that it is only after the subsidence of the pain and with absolutely no residual tenderness, the picture clears. It was once my privilege to autopsy and dissect out such a celiac axis from an old lady who was operated upon for what was thought to be an acute surgical belly demanding operative interference; in this case the celiac axis presented a typical pipestem sclerosis throughout.

Early diagnosis spells more favorable prognosis through the avoidance of such complications as common duct obstruction, pancreatitis, cardio-renal and malignant changes. Not rarely does a chronic gall-bladder patient develop such a degree of kidney inadequacy as to render him a poor surgical risk.

The controversy as to treatment has now shifted from the internist to the surgeon. No competent internist will dally long with a demonstrable pathologic gall-bladder, nor will any good surgeon obligate himself to a definitely planned procedure until after he is in the belly and then very often the indication is not always clear as for removal or for drainage. There can't be much question on the whole but that cholecystectomy is rapidly supplanting cholecystostomy, even though it may often be necessary to drain the common duct at the same time. Recurrences take place after either operation, though probably less commonly after removal. That recurrence does obtain, however, in the ducts after cholecystectomy is well illustrated in Judd's case wherein he thrice removed stones from the common duct after a primary cholecystectomy. Occasionally the recurrence is in the hepatic duct or in the liver even, and in this connection one realizes that we are in greater need for more light on the physiology of Oddi's sphincter, and the effect produced upon it and the rest of the biliary tract by removal of the gall-bladder, a study only begun by Archibold, Mann, Judd and others.

PENETRATING EYE INJURIES*

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It is not difficult to select those methods of procedure which stand out as tried and proven. A few years ago I made such a selection and have consistently followed it in the treatment of these cases. I have added to it and subtracted from it at various times by the substitution of new and better methods, but have not made any radical change in the general program. It goes without saying that in certain cases some of the steps are omitted because they are unnecessary. It is, of course, necessary to fit the technic to the case, and not the case to the technic. Rigid adherence to any group of medical or surgical procedures would be impracticable.

GETTING A COMPLETE HISTORY OF THE ACCIDENT.—If you see the patient soon after the accident, while the associated details are clear in his mind, you are able many times, by combining his statements with the examination of the eye, to discover points that will benefit you in determining the treatment of the case. He will be able to tell you what he was doing and what kind of tools he was using when injured. He also may know just what kind of an object struck him in the eye—its size, shape, etc. For instance, if he was hit with a nail or some object of like size, or if he cut his eye with a sharp instrument or tool, we can at once safely conclude that there is no foreign body in the globe. This history, if carefully taken from an intelligent patient, should have the bearing in the case that its importance merits. Many times it will simplify the operative treatment and be explanatory of later developments.

EXTERNAL EXAMINATION OF THE EYE.—The external examination of the eye should be made most carefully, and definite knowledge obtained as to the kind of wound, its extent, position and the relations of the wounded structures, one to the other. The diagnosis between contusion and perforation is sometimes difficult, and this should be determined at this time. The type of the wound and the condition of the globe should determine the prognosis and the treatment. For example, if the cornea is shattered, if the eyeball is totally destroyed from rupture, or the vision is totally lost from hemorrhage, it would be folly to attempt to save the eye either for visual or cosmetic purposes. The gradations of injury from the slightly wounded to the completely destroyed eye-ball are nearly as numerous as the number of eyes injured. So whether the injured eye has normal vision or only light perception it certainly takes delicate weighing of all the information you are able to obtain in each individual case in order to do full justice to the patient.

It also is wise to make an external examination and take the vision of the uninjured eye. Many factories have the vision of each eye of their workmen taken by a competent man at the time of their application for employment. This information is invaluable, not only from a medico-legal standpoint but as a basis for determining the amount of damage to the vision and the prognosis of the case. McBean[1] reports a case of a man with a foreign body in one of his eyes whose other eye was amblyopia exanopsia from strabismus. A case of this character would naturally be treated differently than if the vision in the uninjured eye was normal. He also reports another case of pneumococcus ulcer from a cinder imbedded in the cornea which was removed by a rusty nail. Patient had trachoma in the uninjured eye which later involved injured eye after ulcer had healed. This resulted in pannus developing on top of the leucoma.

OPHTHALMOSCOPIC EXAMINATION.—When the media are clear, or if the eye is seen before they become cloudy, valuable information may be obtained by an ophthalmoscopic examination. The position and condition of the intra-ocular structures may be observed and sometimes you are able to see the foreign body somewhere in the interior of the eye. A great many cases of this type have been reported. Lambert[2] reports "a case seen five months after injury in which external appearances were normal. Ophthalmoscopic examination showed a piece of steel projecting from the sclera. There were some vitreous opacities, some changes in the choroid, and the optic disc was slightly congested."

Double perforations are not uncommon, and in case a foreign body has made a counterpuncture in the posterior segment it may be possible to see the point of exit. In a case of this kind if the eye is quiet and the x-ray shows only one foreign body you can safely decide not to remove the eye.

The importance of making an ophthalmoscopic examination early and as complete as possible is of course apparent to every ophthalmologist, and everyone will agree, I believe, as to the wisdom of making it a routine measure if feasible.

X-RAY EXAMINATION OF THE EYE.—The next logical step to take is to make a complete x-ray examination of the eye if there be the slightest suspicion that the eye contains a foreign body.

*Read before the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association, September, 1920.

(1) McBean, Dr. Geo. M. Personal Communication.
(2) Lambert, W. E. Foreign Body in Globe. Arch. of Ophth. V. 48, p. 284.

I believe that all ophthalmologists will admit that this examination should be made, and realize the importance of making it early. This should be done by a radiographer experienced in this kind of work, and whose opinion, consequently, we can depend upon. Valude[3] insists that "the detection of very small intra-ocular bodies by the x-ray requires special training, and that even a good radiographer for general surgery may overlook a foreign body in the eye." We should determine whether there is a foreign body in the eye or in the orbit. This can be done as practiced by Valude[3] who states that "two radiographs should be taken, one frontal with the face toward the plate, the other lateral with the suspected side towards the plate. If careful examination of these show nothing, it may be concluded that no bodies visible by the x-ray are present." In the event that the foreign body is discovered it should be localized by the Sweet method. Some of the ophthalmologists and radiographers have attempted to improve the Sweet method, or introduce methods of their own which they consider superior to it. I do not believe this is possible, as the Sweet method is now so practical and reliable that every radiographer of first class ability and training should be able by its use to furnish us with exact information. Pirrie[4] "with geometric drawings illustrates how Sweet's method can be at fault," but T. B. Schneidmann[5], commenting on this statement, declares that "Pirrie seems unacquainted with Sweet's later work which guards against possible error."

We should also discover, if possible, whether the foreign body is intra or extra-ocular, which is of great importance. In the event that the Sweet method does not give us this information, a method outlined by O'Brien[6] can be used. It is as follows: "Suppose the exposure for the picture is ten seconds. For the first five seconds have the patient look straight out, then have him change the direction of the visual axis by rolling the eye up as much as possible and complete the exposure. Make another exposure, but do not move the eye. If the foreign body is in the globe, the x-ray will show either two bodies or an extension in the direction of the movement of the opacity as compared with the latter picture. When the foreign body is in the orbit or adjacent tissues its position is not affected by any movement the eye will make. There is, however, a slight possibility of error when the foreign body is in an external ocular muscle or tendon. Then it will show some displacement, but a careful reading of the picture will discover the true meaning."

THE REMOVAL OF THE FOREIGN BODY.—Clapp[7] states that " the chief point in discussion at the present time seems to be the relative desirability of using the anterior method of extraction as advocated by Haab, or the posterior route as championed by Sweet, DeSchweinitz and others. Our experiences up to a few years ago made us rather favor the anterior method. More recently it has changed somewhat and, relatively speaking, I would prefer the posterior route. Of course there can be no hard and fast rule, but all cases are to be handled individually, and in case of recent injury, with the foreign body in close proximity to, or even in the wound of entrance, immediate extraction through the wound is preferable. We are aware that Col. Lister established very definite rules for extraction by the anterior route, but certainly our cases of posterior extraction were more satisfactory than those removed by the anterior route, and in none of our cases did we experience the troublesome detachments reported by some. On the other hand this class of cases cannot be handled dogmatically, but each case should be carefully studied, with the exercise of one's best surgical judgment."

Lamb[8] reviews the literature on the extraction of foreign bodies from the vitreous by the anterior chamber with the scleral route. He concludes that "there is as much authority for one method as for the other." He thinks that "in recent injuries, where healing has not yet occurred, the steel should be removed through original opening. When the wound has healed and the steel is in the lens or anterior to the lens, it should be removed through the cornea, but where the wound has healed and the steel is in the vitreous chamber, it should be removed through the sclera."

Koster[9] in discussing the management of cases with small foreign bodies in the periphery of the anterior chamber states that "if the foreign bodies are magnetic and the trauma recent they should be removed through the original wound with the giant magnet. If the foreign body is small and the wound has closed, a new opening is made at the periphery of the anterior chamber, where the piece drops when the magnet stops attracting it."

Shackleton's[10] experience in thirty-five cases convinced him that "the anterior route will as

(3) Valude, E. Radioscopy and Radiography of Ocular Foreign Bodies. Annales d' Oculistique. June, 1918. V. 155, p. 261.
(4) Pirrie, A. H. Localization of Foreign Bodies in the Eye. Arch. of Radiol. and Electro-therap., November, 1918, p. 169.
(5) Schneidemann, T. B. Injuries. A. J. of O., December, 1919.
(6) O'Brien, John J. Foreign Bodies in the Eyeball. Three Illustrative Cases. A. J. of O., May, 1919.
(7) Clapp, C. A. Removal of Steel from the Eye from an Industrial Standpoint. A. J. of O., May, 1920.
(8) Lamb, H. D. Extraction of Foreign Bodies from Vitreous. Interstate Med. Journ. V. 25, p. 577.
(9) Koster, W. Removal of Small Foreign Bodies from Anterior Chamber. Tijdschr. V. Genneesk, 1917. V. 1, p. 802. Abst. A. J. of O. V. 2, p. 217.
(10) Shackleton, A. J. of O. V. 1, p. 206.

a rule yield the best result". In no case in which the original scleral wound is not open, would he choose the scleral route unless the foreign body could not be brought into the anterior chamber after prolonged effort.

Shoemaker[11] states that "if the anterior segment of the eye-ball is intact and uninjured, I certainly would not injure it by dragging a foreign body from the vitreous into it, and further injure it by taking a foreign body from it. We all know the foreign body is supposed to come into the anterior chamber, but we also know that it sometimes is clumsy and spoils a perfectly good lens or iris in its transit."

I am quoting these various writers in order to demonstrate that there is not as great a divergence of opinion as one would think. The majority believe that the foreign body should be removed as expediently as possible, with a minimum of trauma and the saving of all possible vision. Most of them remove the foreign body through the wound as close to the location of the foreign body as possible, whether it be the wound made by the foreign body or an incision made by the operator. There is, however, a small minority who insist that the foreign body in the anterior chamber should be pulled back through the lens, the vitreous, and an incision in the sclera; and that the foreign body in the posterior segment of the ball should be pulled through the wound of entrance if it happens to be somewhere in the anterior segment.

I am impressed that a little judgment used in the selection of a route for removal of the foreign body would not be amiss. The result desired is a sightly eye with as much vision as possible, and this cannot be obtained by arbitrarily forcing each wounded eye containing a foreign body to fit an inelastic, unbendable technic. The foreign body should be removed just as quickly and easily as possible, regardless of the wound of entrance. What is gained if you do get the foreign body and ruin the ball or lose the vision?

The intra-ocular foreign body demands removal as soon after injury as possible, but if its removal is fraught with difficulty and it is decided that it will be associated with so much traumatism that the vision will be lost, either the eye should at once be enucleated or the case kept under observation if the eye is quiet. This manner of procedure is particularly applicable to cases of non-magnetizable intra-ocular foreign bodies, frequently seen, which are sometimes impossible to extract by any method without ruining vision and the globe. Terrien[12] calls attention to the well-known fact that "occasionally the foreign body may not only be tolerated, but its presence be compatible with many difficulties; even large bodies have been removed several months after penetration; and that one would not entertain the idea of exposing to all the dangers of extraction an eye possessing good visual acuity."

THE SELECTION OF A MAGNET.—The large and small magnets both have their respective fields of usefulness, and one should not arbitrarily use either one or the other for all cases. I believe with Lamb[8] that "both the large and small magnets are necessary to an oculist's outfit, for, whatever method is favored, each will at times be of value." Frenkel[13] states that "in the case of large foreign bodies the small magnet is more conservative of the tissues, while the small foreign bodies are more easily removed by the large magnet. In other words, it is a mistake to feel that either the large or the small magnet is always the best in every case." Sweet[11] found, in testing the relative strength of the Haab, the Hirschberg and his own magnet, that "at 2 mm. distance, his own was superior; at 5 mm. the Haab was stronger, but not markedly so: while at 10 mm. or more, the large magnets were decidedly superior."

THE REPAIR OF THE WOUND.—It appears that almost every ophthalmologist is in favor of covering the wounds with conjunctiva. Methods vary with different men; some use small and others large amounts. "The importance of suturing the eye-ball and covering wounds with conjunctiva as soon as possible after injury" has been urged by Krusius[14]:—"In wounds of the globe Kuhnt's conjunctival covering is to be recommended, closure of all gaping wounds by sutures and covering with a conjunctival flap."

Putnam[15] uses conjunctival flaps for large injuries of the cornea. He classifies the operations as follows: "(1) The single pedunculated flap. (2) The double pedunculated flap. (3) Two flaps, one with a single peduncle, the other with two bases. (4) The complete flap."

Shuster[16] advises using conjunctival flaps in perforating wounds of the cornea and sclera, and calls attention to "the necessity of thorough asepsis and prophylaxis to prevent infection".

I am in favor of the liberal use of conjunctival tissue in closing the wound. First, the method used should be one which will produce a minimum of trauma; second, which will not intro-

(11) Shoemaker, Wm. T. Penetrating and Perforating Wounds of the Eye-ball with Diagnosis and Treatment of Retained Foreign Bodies. A. J. of O., August, 1919.

(12) Terrien. A. J. of O. V. 1, p. 207.

(13) Frenkel, H. Prognosis and Treatment of Penetrating Ocular Wounds. Arch. d' Ophthal. V. 36, p. 193.

(14) Krusius. A. J. of O. V. 1, p. 202.

(15) Putnam, F. I. Use of Conjunctival Flap in Eye Injuries. Journ. Lancet. V. 39, p. 41.

(16) Schuster, S. A. Use of Conjunctiva in Perforating Ocular Injuries. Southwestern Med. V. 2, pp. 1-3. No. 14.

duce or leave a passage for the introduction of infection, and third, which will leave the framework as strong as before the injury.

Allport[17] never stitches the sclera in any of his cases but a great many operators do where the conditions warrant it. If the conjunctival flaps bring the cut edges together with almost a certainty of union it is unnecessary, but if the wound is extensive and there is a prolapse or a threatened prolapse of a goodly proportion of the vitreous it should be done. Certainly no infection can result where the proper aseptic care has been taken.

Two conjunctival flaps should always be used, so that there results a double conjunctival covering over the wound and the stitches used should be placed as far away from the wound as possible.

SUBCONJUNCTIVAL INJECTIONS.—One of the most useful measures in gaining a good result, and one which I believe should always be used in these cases, is the subconjunctival injection of either mercury oxycyanide or mercury cyanide. Personally, I prefer the oxycyanide, but the majority of those who use this treatment think that the cyanide is the better of the two.

Black[18] commenting on the use of mercury cyanide in a severely infected and penetrating injury states that "it was injected subconjunctivally, causing a very violent reaction, but the progress of the infection was at once arrested".

Bulson[19] states that "subconjunctival injections of cyanide of mercury are deserving of most extensive use".

A very weak solution of one or the other should be freely injected all around the eye following the repair of a penetrating wound, so that the eye is completely bathed in the solution. It has been my experience that this treatment prevents secondary infection, and eliminates the infection already present. By the use of this remedy I have been able to save eye-balls with large wounds in the most vital regions which have been, undoubtedly, contaminated with many septic agents. I have taken sutures through the cornea, through the sclera when there was a large prolapse of vitreous and iris, and where the eye was badly traumatized both by the injury and the necessary operative work, with prompt healing and fair vision resulting. This has been unquestionably due to the fact that the eye was rendered aseptic by the complete exhibition of this method.

THE USE OF WHITE'S OINTMENT.—I have a great deal of faith in bichlorid salve used in the cul-de-sac, and iced compresses following the operation. I have used these agents in almost every case for the past several years and believe that they are of great help in obtaining a good result.

JUDGMENT ON THE DANGER OF SYMPATHETIC OPHTHALMIA.—Sympathetic ophthalmia is the ghost that haunts the ophthalmologist, but there is no need of fearing this disease if proper judgment is used. If it be remembered that sympathetic inflammation does not occur in less than three weeks from date of injury, a delay of ten days or two weeks is comparatively safe.

Sordille[20] did not see a single case in more than 3,000 military wounded, and but five in civil patients. Three of these resulted in blindness. Dimmer[21] also states that "this disease occurred very rarely in the last war". He concludes that "the marked reduction in the number of sympathetic ophthalmias in war injuries is due to timely enucleation, a fact that would deserve the widest publication".

I believe I am warranted in declaring that if a prompt and rational decision is made, this dreaded disease need not be feared. Taking into consideration the type of wound, the condition of the globe, the vision of the wounded eye, the vision of the other eye, and the other details of information gained by a complete and exhaustive examination, together with a period of observation not longer than two weeks, should make it possible to definitely determine whether the globe should or should not be enucleated. Good, clear-headed judgment in summing up and interpreting this information will enable the ophthalmologist to steer clear of mistakes.

SUMMARY.—I believe the following methods of procedure which I have selected from the rich fund of ophthalmological experience quoted are rational and practical measures which should be followed consistently in all penetrating eye injuries:

(1) A complete history of the accident should be obtained from the patient as soon as possible.

(2) A careful external examination of the eye and wound should be made as a guide to further operative procedure and, particularly, in order to establish a diagnosis between contusion and perforation.

(3) Next an ophthalmoscopic examination is in order, if the media are clear. Valuable knowledge can be obtained by using this procedure as a routine measure.

(4) A complete x-ray examination of the eye should be made, preferably by the Sweet method, if there be the slightest suspicion that the eye contains a foreign body. This should

(17) Allport, F. Removal of Steel from Eye. New York Med. Rec., v. 106, p. 1205.
(18) Black. A. J. of O., v. 1, p. 199.
(19) Bulson. A. J. of O., v. 2, p. 201.

(20) Sordille. A. J. of O., v. 2, p. 105.
(21) Dimmer. War Injuries and Sympathetic Ophthalmia. Klin. Monatsb. f. Augen Heilk, v. 57, p. 567.

be done by a radiographer whose training and experience with the Sweet method qualifies him to make a definite diagnosis.

(5) If an intra-ocular foreign body is discovered, and its removal is not fraught with difficulty, it should be removed at once. The route selected should be the shortest distance between the foreign body and the outside of the globe, regardless of the location of the wound entrance, and a method used which will result in a minimum of trauma and a saving of all possible vision.

(6) In the event the foreign body is magnetizable the type of the magnet should be chosen only after a careful consideration of all details, with full regard to expediency of extraction.

(7) The wound should be repaired by stitching the sclera (and the cornea, if absolutely necessary) if there is a prolapse or a threatened prolapse of any of the intra-ocular structures; and conjunctival flaps should always be used covering the full extent of the wound.

(8) A subconjunctival injection of a weak solution of either mercury cyanide or oxycyanide should be used following the repair of the penetrating injury.

(9) The use of White's Ointment and iced compresses following the operation should be routine measures.

(10) The decision as to whether the eye is allowed to remain, or is enucleated in order to avoid sympathetic ophthalmia, should be made not later than two weeks following the injury, after full consideration is given to the information you obtain from a complete examination. In case of doubt it is wise to remove the injured eye. It is far better to have one eye-ball with good vision than two eye-balls and no vision.

DISCUSSION

DR. W. A. HOLLIS (Hartford City): It is very important to get a complete history of these eye injuries early, as Dr. Adams has advised, for other reasons than aiding you in the diagnosis. The history should be a matter of record as a protection for yourself, an aid to the industrial companies, and an aid to the patient. Your duty to the industrial company is no more important than your duty to the individual himself, and the first three points of the essayist's conclusions would certainly embody a complete history: The ophthalmoscopic examination, the external examination, and the eliciting of the method of injury.

I can neither condemn nor endorse the subconjunctival injections of mercury cyanide or oxycyanide for the reason that I do not use them because they are so violently irritating and so painful. Of course I am aware that a terrific reaction of this kind is a thing to be desired, yet the discomfort of the patient does not seem to me to justify the use of mercury cyanide when there are other agents that will accomplish the same purpose. The use of White's ointment and ice is a practical point, and a very important one.

I agree with Dr. Adams in the use of the mercurial ointment. I use it preliminary to all operations upon the eye in which the anterior chamber is to be opened. Always after the operation I use it as a dressing, and in the repair of all conjunctival wounds. That, in conjunction with the use of ice for the first 24 hours, is certainly very gratifying.

Localization of foreign bodies is of the utmost importance, but must be carried out very early. Localization is sometimes secondary to the actual removal of the foreign bodies, because of the adhesions that are liable to form around the foreign body. The foreign body may lie in the eye for years without giving any trouble, if it is not too near the danger zone. Collins reports a case in which a foreign body remained within the posterior chamber near the uvea for fifteen years without giving any disturbance whatsoever. Sometimes the meddlesome interference in its attempted removal is a great deal worse than actually leaving it.

Sympathetic ophthalmia is the nightmare of all of us. Fortunately we do not see very many cases. I certainly will agree with Dr. Adams that early enucleation is indicated if the injured eye is not mending properly.

DR. ALBERT E. BULSON, JR. (Fort Wayne): The paper presents the subject in a classical manner and the recommendations are those followed by most all competent and experienced eye surgeons. I wish to emphasize the importance of considering penetrating injuries in the ciliary region or "danger zone" as of far more import than any other type of injury as to the possible production of sympathetic inflammation. I also wish to condemn the practice of promptly enucleating punctured eye-balls except when there has been extensive loss or hernia of intra-ocular contents. The eye-ball, even though blind, is better than an artificial eye, and the vast majority of punctured eye-balls may be saved. The experience in our late war demonstrated that sympathetic inflammation is much rarer than generally thought, and the rule was to save eye-balls rather than enucleate, though such judgment as advocated in the paper was employed. Sympathetic inflammation does not occur short of three weeks after the injury and seldom that soon, so that during the interval the fate of the eye-ball may be determined. Proper treatment will not omit subconjunctival injections and the intelligent use of the subconjunctival flap.

As to extraction of foreign bodies I am in favor of using the wound of entrance when the foreign body can be drawn out that way with

a minimum amount of trauma to intra-ocular contents. In all other cases I prefer making a wound near the foreign body. However, every case is a law unto itself and the procedure and technique will vary accordingly.

DR. G. H. MUNDT (Chicago): I enjoyed the paper very much because it expresses to a very large extent my own sentiments regarding the handling of a foreign body in the globe. There are some men, particularly in our city, who in private conversation have told me that it was of no value to localize a foreign body in the globe. I think that is folly. I think that if it is at all feasible, the localization of the foreign body in the globe should be done.

Relative to the route. Certainly I think it is folly to draw a foreign body through the lens and take it out through the anterior chamber if that foreign body has penetrated the globe through the sclera. I cannot understand why anybody should do it. Yet I know very well that there are men of wide experience who do it.

I think the pendulum of conservatism on enucleation is probably swinging back, and there are going to be more enucleations made, and more promptly, than in the last ten years. I think one reason for that is because there is a general feeling that men who have eye injuries and who are not going to have useful globes, should have their period of disability reduced to a minimum, and certainly an enucleation reduces that period of disability to a minimum.

I like subconjunctival injections very much. Sometimes I use a solution of cyanide of mercury, and sometimes I use a three or four percent solution of sodium chloride which is not as painful. I rather think I get just as good results with it.

I have taken up practically all of the antiseptics that have been brought out in the last several years, and have been enthusiastic about some of them, but I have never had anything that has been as satisfactory over as long a time as mercurochrome 220. I learned from Dr. Bulson last night that a five percent solution is all right. I have been using the two and a half percent solution. It really has great value.

DR. M. H. KREBS (Huntington): There is one thing that I would like to impress upon the members of the section, and that is the routine examination by the x-ray. I think that is a procedure that one should take as a means of self protection, yet at the same time absolute reliance cannot be placed upon it insofar as the exact localization of the foreign body is concerned. I have one instance in mind. A foreign body, supposedly a stone, had been chipped off a larger stone, and entered the eye-ball. The wound was large and gaping. There was considerable hemorrhage into the globe. There was no question in my mind but that the foreign body was in the globe, yet the parents objected to enucleation. An x-ray picture was taken, and showed distinctly that there was a foreign body somewhere within the orbit. The Sweet method was not used for localization, but I felt positive from nature, position and the extent of the wound, from the picture, and also from the explanation of the roentgenologist, that that foreign body was within the globe. I enucleated the eye. Now, I have not succeeded in keeping relatives out of the operating room, under such conditions, and the relatives in this case were in the room, and wanted to see what was in the eye. I assured them that the piece of stone was in the eye-ball, yet when the eye was removed and opened by my assistant there was an opening in the sclera but the foreign body was not found within the eye-ball. I felt within the orbit, and there was the foreign body, the stone, which looked very similar to the picture that we had seen, but it was entirely outside the globe, and of course had entered the orbit through the globe. Up to this time I have not been able to convince the parents of this child that my procedure of enucleation was not wrong. If it had not been that they could not obtain an attorney to start suit against me I believe that I would have had a malpractice suit on my hands. To this day they still believe that something other than enucleation should have been done.

As a routine matter for your self protection, it seems to me that there is nothing better than the x-ray picture. Yet at the same time it must be remembered that exact localization—and I am sorry to say that the Sweet method was not used in the above case—does not always afford you the absolute information that you require. In this case nothing else could have been done, as the contents of the eye-ball had been destroyed.

DR. C. N. HOWARD (Warsaw): From both the scientific standpoint, and also to avoid any possible legal turn of events, I think it is a very good plan to have both the distant and near vision taken of both eyes, no matter what the eye condition is. Of course with a penetrating wound of the eye it is more essential. If this is done before any treatment is begun, then you have your data, you have your facts as to what that vision actually was. That is often a very valuable thing to go back to afterwards, for the patient's benefit and for your own reference.

DR. CHARLES J. ADAMS (closing): There is one point that I would like to mention again and to emphasize, and that is the use of the subconjunctival injections. I will report a case in point.

A little girl who was congenitally blind in one of her eyes stepped on a half of a metal barrel

hoop. The other end flew up and struck the little one on her good eye, penetrating the cornea. The child was brought to my office and I covered the wound with conjunctiva but I did not use any subconjunctival injections. Really it was the only case of any importance in which I have not used this method. The eye apparently did very well for a few days but had an unfortunate termination. Sepsis resulted, and the eye-ball had to be enucleated.

I believe that patients will forget pain, but they do not forget the loss of their vision, and I see no reason why this method should not be used in every case that is at all serious.

I live in a factory town, and we have a great many injured eyes there. I have had many cases where, for example, the eye-ball was cut through the cornea, through the uvea and sclera, in some cases probably a half an inch. They were terrible wounds, but I have repaired them, using the subconjunctival injections of mercury oxycyanide, and never had a shadow of sepsis, and in some cases with as good as 20-40 and 20-30 vision.

If there is anything in the paper which is of importance and should be impressed upon your minds, it is the use of subconjunctival injections, for I believe it is the most important procedure you can take in the handling of these cases. The rest of your treatment may not amount to anything if this method is not used.

PUERPERAL ECLAMPSIA*

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This paper begins with quotations from Lusk:

"Puerperal eclampsia is a term used to designate the convulsions occurring during pregnancy and child bed, due to some toxic conditions peculiar to the pregnant state. The estimated frequency of the occurrence of eclampsia is one to five hundred labors, and the death rate from 14 to 32.4 percent. In a vast majority of cases the victims of eclampsia are primipara. At least 75 percent are primipara, and very nearly all the rest occur in second labors. The disease seldom occurs prior to the sixth month of utero-gestation, and the majority of the cases begin during or just after labor. Usually the disease is preceded by some premonitory symptoms, the most constant of which is headache. Among the other premonitory signs may be mentioned ringing in the ears, flashes of light before the eyes, and nervous agitation.

In most of the cases the beginning is abrupt, either during or shortly after labor. Beginning during labor, the convulsion is sometimes preceded by a moment of calm. The patient ceases to complain, and appears to be sinking into a quiet slumber. This lasts only a few minutes, or maybe seconds. The eyes open, the pupils contract. The orbicularis oris muscle contracts, giving the patient a smiling aspect. Then in a few seconds the eyes open and shut rapidly, the eyes move from side to side or roll upward, while the pupils dilate and lose their sensibility to light. Very rapidly the convulsive twitching extends to the other muscles of the face. The mouth opens and is drawn to one side, the head moves from shoulder to shoulder, sometimes with lightning rapidity, the convulsive movements extend to the extremities and in severe convulsions the tongue is frequently bitten and the patient froths at the mouth. As a result of the disturbance of the circulation the carotid pulsates, the veins of the neck swell, and the face becomes cyanosed. The heart's action becomes irregular and intermittent and the breathing irregular and stertorous."

"In tonic convulsions, which occur intercurrently with clonic ones, the head is drawn to one side, the mouth and eyes in the same direction, the jaws open and close, opisthotonos or pleurothotonus develops, the pulse becomes small and intermittent, the respiration is suspended, the body covered with cold and clammy sweat, and often involuntary micturition and defecation takes place. The tetanic condition often lasts from fifteen to thirty seconds, gradually diminishing in intensity. As the convulsions cease, the distortion of the face relaxes, the mouth opens, and frothy saliva tinged with blood escapes from the mouth and nostrils, and stertorous breathing marks the beginning of sopor. The depth of the sopor is in proportion to the severity of the attacks.

"When the convulsions are repeated, the patient in the intervals can no longer be aroused, but passes into a state of complete unconsciousness. The duration of a single attack seldom lasts over a minute, and owing to the suspended respiration in the very nature of things could not last long and the patient live. In the milder cases, occurring during labor, the convulsions cease with the emptying of the uterus, or rapidly diminish in severity, but in severe cases I have seen them continue in almost unabated severity for 48 hours after delivery."

Of the complications that may occur with convulsions may be mentioned post partum hemorrhage, puerperal inflammation, amblyopia, puerperal mania, and other psychical disturbances. In fatal cases death may be due to carbonic acid poisoning, to tetany of the respiratory muscle or exhaustion of the nervous system, or from asphyxia from swelling of the tongue.

The prognosis is always serious and, as before mentioned, the mortality ranges from 14 to 32.4 percent. The earlier convulsions occur

*Read before the Medical Section of the Indiana State Medical Association at the South Bend session, September, 1920.

in labor, the more unfavorable the prognosis. I have met with nine cases of eclampsia that I can recall in my own practice, and five in consultation with other physicians. Of my nine cases, three occurred before labor. All were primipara. One was a miscarriage, about the end of the fifth month, in which convulsions began early and continued until some time after the uterus was emptied, but ceased soon after and she recovered completely. One of the others occurred about the first week of the eighth month. She had a rapidly developing edema, almost amounting to general anasarca. Scanty urine with a high percent of albumin. The convulsions were terrific and followed each other in rapid succession. After the second convulsion she was unconscious practically all the time. The arterial tension was high, pulse hard, small and vibratil. The tension was somewhat relieved by Veratrum viride, 15 drops hypodermatically. The membranes were punctured to induce labor, salines were given freely per rectum, and citrate of potassium twenty grains in water every four hours when she could swallow. The tincture Veratrum was given in fifteen or twenty minim doses every three or four hours without any undue depression. Labor came on after three days and after the uterus was emptied she slowly recovered.

One of the worst cases I have ever seen had her first convulsion about four hours after the completion of an otherwise normal labor. There was no edema in this case or anything to call attention to the impending attack. Labor was not prolonged beyond the usual time of normal labor for primipara, but just after labor she complained of headache and was restless. I saw her again in two hours. She was still restless and complained of headache and appeared somewhat excited. I gave one-fourth grain morphine hypodermatically. I then left town for about two hours, and when I returned I found her in convulsions. In the meantime Dr. Bird had been called after the first convulsion. He managed to get a small amount of urine by catheter, and found it heavily loaded with albumin and excessively acid, and had left a note for me to that effect. When I arrived I found her in a convulsion again, after which she lapsed into complete unconsciousness. The convulsions were partially controlled by chloroform, but continued through the night and next day, notwithstanding the fact that she was given potassium bromide 30 grains and chloral hydrate 10 grains per rectum every three hours. The colon had been flushed with normal salt solution, and during the day we managed to get 5 grains of calomel down. About four p. m. I called Dr. Bird and asked him to bring an ounce of Norwood's tincture of Veratrum with him. When he arrived the patient was completely unconscious, and most of the time when not under chloroform she was in terrific convulsions; temperature 104, pulse small vibratil, pupils dilated, breathing stertorous when not under chloroform. We began with 15 minims by the hypodermic method, increased the second dose to 20 minims, and the third dose was increased to 25 minims. The dose was repeated every two hours. After the third dose, the pulse became softer and fuller, the breathing improved, the skin became moist and the interval between convulsions was lengthened. After midnight chloroform was only administered for short intervals during convulsions. The last light convulsion occurred about 4 a. m., the last dose of Veratrum about 5 a. m., soon after which the patient slept quietly for several hours, and then gradually returned to consciousness. No more convulsions occurred.

As to the cause or causes of puerperal eclampsia nothing definite is known, scarcely any two writers agreeing altogether as to the pathogenesis of the disease. Lusk was firmly of the opinion that the renal insufficiency was the chief underlying cause of eclampsia. Sajons defines eclampsia as an acute disorder of pregnancy, due to an accumulation of waste products in the blood owing to the inability of the adrenal system to convert the excess of wastes due to the presence of the fetus into benign and eliminable end products; others hold that the placenta is the source of some toxin which is the primary exciting cause of the trouble, and still others, that the fetus is the source of the poison. As we study these propositions we find that neither of them offers a satisfactory solution of the problem that confronts us. We will now briefly notice these propositions:

First. Renal insufficiency. In my experience in every case of eclampsia, there has been more or less diminution of the volume of urine passed, sometimes almost amounting to suppression, marked albuminuria with intense acidosis, and, in nearly all, more or less edema. Casually it would be easy for me to conclude that the eclampsia in all my cases was due to renal insufficiency; but when we study the subject more closely, we find that many women have more or less marked albuminuria with acidosis and high blood pressure who do not develop eclampsia.

Second. In many fatal cases, kidney lesions are not found, or are wholly insignificant.

Third. Convulsions are rare in chronic Bright's disease.

Fourth. In many cases of true uremia with suppression of urine, convulsions do not occur.

Urea, the principal product of proteid metabolism excreted by the kidneys, is formed principally by the liver, and comes to the kidneys in the blood preformed, hence the lessened

amount of urea excreted is no evidence of renal insufficiency, but is more likely due to functional inactivity of the liver whereby the normal metabolic processes by which urea is formed are in some way interfered with, with the consequent retention of the nitrogenous anticedents of urea in the blood. Wells:—"Of the known constituents of the urine there are few that are toxic to any considerable degree, and these occur in but very small quantities. Urea is generally considered as absolutely non-toxic, the animal body withstanding the injection of large quantities without appreciable injury."

Urinary changes are practically invariably present in eclampsia, and usually they are profound, although there are no known characteristic qualitative or quantitative differences from the urinary changes of puerperal albuminuria without eclampsia. Proteins are abundant, including a large proportion of globulin, decreasing rapidly after delivery as a rule.

The urea is usually very low but generally increases very rapidly after delivery until two or three times the normal amount is passed per day. As urea and ammonia do not seem to be greatly increased in the blood, this has been interpreted as indicating that during eclampsia there is an accumulation of the precursors of urea in the system. The toxicity of the urine in normal pregnancy is very much increased if the kidneys are unimpaired by nephritis, but decreased if the permeability of the kidneys is impaired by nephritis. These findings all indicate that oxidation within the body is decreased. The theory that the fetus is the source of some special poison has been advanced by some writers, but with no proof whatever to sustain it. "However, there is some plausibility in the idea that eclampsia is initiated by the excessive products of metabolism, from both the fetus and her own over-active system, being thrown into the blood, thus causing injury to the kidneys, leading to further retention, or injury to the liver so that the normal metabolic processes of the liver cannot be carried on; or perhaps both liver and kidneys are impaired, as well as other organs, thus forming a vicious circle which may lead to an overwhelming of the maternal system by poisons derived from both her own and the fetal tissues. This is purely speculative." (Wells.) Some other writers have thought that the placenta was the source of the poison—that in some way placental cells found in the blood of eclamptic women were concerned in the production of the disease.

Concerning the ductless gland theory of eclampsia, I think there is some room for speculation, but as yet it is all speculative. It has long been known that in normal pregnancy the thyroid gland is enlarged to a greater or less degree, and that in eclamptic women that enlargement is always diminished or absent; also that eclampsia is notably frequent in myxedematous women.

We also know that the activity of the organs chiefly concerned with digestion and oxidation are in some way profoundly influenced by the so-called internal secretions. We recognize the fact that injury or disease of the adrenals profoundly affects the vital process, but just why or how this should happen in pregnancy we do not know. Then, in view of the unsettled state of the pathogenesis of the disease, our management must be largely empirical. The ductless glands have been thought by some to be mainly responsible for the failure of proteid metabolism that cause the retention of these products in the system until the maternal system was overwhelmed by unoxidized products of nitrogenous material. We also know that the activity of the organs chiefly concerned with the vital processes of oxidation and elimination are profoundly affected by the internal secretions. This is evidenced by the fatal effects of disease of the adrenals, but just how or what relation these may sustain to eclampsia we do not know. I very seriously doubt that any specific poison is the cause of eclampsia, or that the disease is due to the functional failure of any single organ, but believe faulty elimination by all the excretory organs is the cause. Of these I would place first in importance the bowels, second the kidneys, third the skin.

In my experience I have found women especially prone to constipation brought on chiefly by neglecting the calls of nature, and in most of my cases of eclampsia a history of constipation was present. Then again, I have noticed that in most of my cases the opportunities and conveniences for regular bathing were often absent, and I can readily see how these combinations of circumstances may lead to a condition in which elimination may be so retarded as to endanger the functional activity of all the organs concerned in the process of oxidation and elimination. In our efforts to find a specific poison to account for eclampsia, it seems to me that investigators have overlooked one of the chief factors in the pathogenesis of the disease, to-wit: the individual—the nervous susceptibility of the patient to the irritation of the retained products of proteid metabolism. We frequently meet with cases of albuminuria in pregnancy, with marked edema, acidosis and high arterial tension, and yet they go through labor and child bed without convulsions. We see the same thing occur in uremia. We meet with the same thing in the fevers and intestinal troubles in children. Only a few of these cases develop convulsions, though the pathology may be practically the same in all of them.

I think eclampsia may be accounted for by recognizing the peculiar nervous susceptibility of the individual. I believe the disease is preventable in almost every case, except perhaps in some few cases wherein the victim is the subject of chronic Bright's disease, and even then, much may be done toward preventing uremic symptoms until late in the progress of the kidney lesions. These are cases of true uremia, however, and differ very materially from true puerperal convulsions.

In view of our limited knowledge of the pathogenesis of the disease, our management must naturally be largely empirical. Treatment should be first prophylactic, second palliative, and third curative. Prophylactic treatment, however, to be efficient must be instituted early. The prospective mother should be instructed in the matter of personal hygiene. She should be early impressed with the absolute necessity of keeping the bowels active as well as giving careful attention to the skin and kidneys. With careful supervision of the woman's health during the latter months of utero-gestation, eclampsia would, I think, be a very rare occurrence.

The urine should be examined frequently, and with the first appearance of edema or excessive acidity or albumen, strict regulation of the diet should be exercised. Meats, especially red meats, and eggs should be prohibited, and the diet restricted to milk and butter, together with cereals and fruits. Strict attention to the bowels should be observed. They should be kept freely open by salines with an occasional dose of calomel. To reduce the acidity of the urine I have never found anything as effective as potassium citrate three times a day, twenty to thirty grains in a glass of water, one hour after meals. For the pyrosis which is so troublesome in some of these cases, I have found calcined magnesia—twenty grains half hour after meals—quite effective, and it often acts as an efficient laxative, obviating the necessity of other cathartics. If this kind of supervision of prospective mothers could always be exercised, eclampsia would be of very rare occurrence.

Unfortunately, however, the majority of these cases are not seen by the physician until labor has set in, or the patient is already in convulsions. In all of my cases, the patient was either in convulsions or labor had set in when I was called. In every one I had marked albuminuria, acidosis, high arterial tension, with, so far as I have been able to ascertain, constipation and scanty urine, in some cases amounting almost to suppression.

The indications for treatment after eclampsia has developed are: First, to control or ameliorate the convulsions; second, to re-establish the secretions and obtain elimination of the pent-up products of proteid metabolism.

To obtain elimination, five to ten grains of calomel should be placed far back on the tongue, followed by some saline as soon as the patient can be made to swallow. My preference is a saturated solution of epsom salts, a teaspoonful given every half hour. The colon can be flushed with normal saline solution. Of medicine to relieve or control the convulsions, potassium or sodium bromide and chloral can be given per rectum in the following dosage: Ten grains of chloral and sixty grains of the bromides. Unfortunately, however, the rectum frequently refuses to retain anything, and the same is true of the stomach. Morphine has been advocated by some writers and may sometimes control the convulsions in mild cases, but I confess that I have never been able to find a plausible reason for giving morphine in a condition where the patient already is poisoned upon her own pent-up secretions. I have found it almost impossible to get the bowels to move for at least twenty-four hours after giving a full dose of morphine hypodermatically. I have found Norwood's tincture of Veratrum viride, given by the hypodermic method, the most effective remedy in controlling the high blood pressure and relieving some of the most pressing symptoms of the disease, *but* to be effective it must be given in full doses of 15 to 25 minims, and it must be given hypodermatically. Given in this way I have seen a small, thready pulse of 120 per minute become full and soft, and a hot, dry skin become moist without any tendency to collapse whatever. The dose should be repeated every two hours until the pulse rate is reduced to normal or nearly so, and then continued in smaller doses and at longer intervals to maintain its effect. The remedy should never be given by the mouth because owing to its local irritating effects upon the stomach mucosa it will produce nausea or vomiting, with symptoms of collapse, which I have never seen when given, even in twenty-five minim doses, by the hypodermic method, and I have given it in some cases every two hours all night, thereby saving my patient's life.

I have never resorted to venesection in any of my cases except one. In that case I had excessive edema, with total suppression of urine and complete unconsciousness. I delivered her of a dead fetus while in that state, and some hours after, I took one pint of blood from the arm, but she never regained consciousness, and died about two hours later. That was the only case I have ever lost, and in fact is the only one I have ever seen die except two occurring in the practice of other physicians, in which cases forcible instrumental dilatation was used to empty the uterus. I assisted in one of these. In both cases convulsions came on about the fourth or fifth month, and neither of them ever

regained consciousness. I think in both of these cases it would have been better to have punctured the membranes and waited for nature to expel the fetus, and in the meantime to have controlled the symptoms as best we could by appropriate remedies. But few women will withstand the shock of forcible instrumental dilatation while in this condition.

It is always desirable to empty the uterus as soon as possible, but as yet the records do not show that forcible instrumental measures have in any way lowered the rate of mortality in these cases. In fact, I think statistics will show a higher rate of mortality for Cesarean section, either abdominal or vaginal, than is obtained by the expectant method. Dilatation with Barnes' bags, or the cervical tampon gently introduced and slowly inflated will do much to assist nature in dilating the cervix, and when we have sufficient dilatation, the forceps may be applied under anesthesia and the labor terminated. I am aware that the use of chloroform is condemned by many good men in the profession, but I have used it freely to control convulsions in all my cases, and have seen no harmful effects. I think it lessens shock, relaxes muscular tension and aids in this way the dilatation of the cervix.

DISCUSSION

DR. JANE KETCHAM (Indianapolis): Dr. Moore has brought before us one of the most important subjects in obstetrics. The more eclampsia I see the more I wonder that these patients ever get well. The way to treat these cases is by means of elimination, first by the bowel and then by the skin. The kidneys are not going to do their work, so we must stimulate by the other two channels. In the presence of an increasing systolic pressure, I feel that the uterus should be emptied and the earlier the better. Toward this end I have used pituitrin. This we all know is a dangerous drug, and I do not use it at all if there are any contractions of the uterus. In a quiet uterus I do use it, and in these cases it is of great help. You all know how difficult it is to dilate manually a cervix which has made no effort at dilatation. My preference is to give 5 minim doses every two hours until three doses have been given, but remembering that the action of the pituitrin is very fleeting, I have no hesitancy in a grave situation in using 1 c. c., but not repeating it. In eclampsia I have repeatedly given a full c. c. Several times I have been able to induce labor without going into the uterus at all.

I would like to cite the case of a patient who came into the City Hospital this year for bleeding. She was 26 years old, a six para. There was no evidence of bleeding after she was admitted to the hospital and she was put to bed under systematic observation. The systolic pressure was 140 and no evidence of renal disturbance was present. A phenolsulphonephthalein test was done the day of admission. At the end of three days the interne called me saying that she had had a convulsion which lasted eight minutes, with a systolic pressure of 195, diastolic 140. I went out and observed the patient in coma. We gave her five grains of calomel and magnesium sulphate 1 ounce by stomach tube, and put her in a hot pack with ice to the head. We also gave her 5 minims of pituitrin and repeated this at two hour intervals until three doses had been administered. At this time the systolic pressure was 250, diastolic 100. There were no further convulsions, but she was deeply in coma. We gave her ether and went into the vagina for the first time, and found about a dollar dilatation. It was comparatively easy to complete the dilatation and I went in and removed a six and a half pound fetus, which drew a few breaths, then died. It was definitely syphilitic.

At this time, before the class, we did a venesection and removed 600 c.c. of blood which was replaced by normal salt and glucose. I never attempt to remove the placenta in less than half an hour after delivery; in this case we tried desperately to remove the placenta but were unable to do so. My rule is to keep out of the uterus, but in this case it seemed we had to get that placenta. First I went in, and then the interne, but we were absolutely unable to get it, it stuck tighter than the paper on the wall. It was then a question of going through the uterine wall or leaving the placenta in. The patient was in a very bad condition, so we left the placenta in and began treating for shock. The following day we gave her pituitrin and applied an ice-bag over the fundus, and the third day, under gas anesthesia, we delivered the placenta very readily.

It has been my experience that all cases of eclampsia have a marked hyperpyrexia following eclampsia. I do not usually fear this, but this woman was very pronounced. She ran a rectal temperature of 106 degrees F. for several days. She was in coma for two or three days following delivery; there was no urine during that time, but we had free sweating and movements from the bowels, and we were not alarmed even in the face of this marked hyperpyrexia. She improved in four days, or, in reality immediately after removing the placenta. This woman had enough to kill her on several different scores; she had the lues, the eclampsia, and the danger of infection, but she made a recovery.

I had another case in a primipara with a general anasarca. She had a very badly impaired kidney function, but after she came into the hospital the urine showed absolutely nothing.

Her condition was fair and she was not in labor. Her condition remained fair for two days and then the anasarca began to melt away. We measured the intake and output, and with an output of 3000 she had an intake of only about 1000. Then her pressure began to increase and, after one convulsion, we delivered her of a living child by forceps. I feel sure that if she had gone on the condition would have become eclamptic. As long as she had her anasarca her condition was good, but as soon as it disappeared her condition became bad.

Too much importance cannot be placed on the early emptying of the uterus and the elimination, by the skin and by the bowel, with as little kidney irritation as possible.

DR. H. D. FAIR (Muncie): I believe elimination is the chief thing in eclampsia, and in addition to giving the Veratrum I try to make my patients sweat and sweat vigorously just as quickly and profusely as possible. Of course Dr. Moore's results prove the value of his treatment. He has never lost a case of his own, but it seems to me that when we add chloroform to the septic condition we are adding to the patient's burden. Personally, I do not use chloroform; if an anesthetic proves necessary I would prefer ether.

DR. WILLIAM MOORE (closing): I think, owing to the brilliant results of modern surery, there is a tendency toward interference, and the performance of Cesarean section in many of these cases that is not warranted by the results obtained.

Forty years ago some old doctor from California spoke of the use of Veratrum in the treatment of eclampsia, and frequently since then men prominent in obstetrical practice have spoken of the usefulness of Veratrum in puerperal eclampsia. But, in general use, the proper method of administration has not been understood. It has fallen into disrepute with quite a number of obstetricians because they have given the remedy by the oral method. Given in this way, even in ten minim doses, it frequently will produce nausea and depression, which never occur when given hypodermatically. The nausea, I think, is due to the local irritating effects of the remedy upon the mucosa of the stomach. I know that Barthelow claimed that the nausea was due to the systemic and not the mechanical effect of the drug, but I am convinced, after using it in quite a number of cases, in twenty-five minim doses hypodermatically, and repeating the dose every two or three hours for several hours, without nausea or depression, that it is not systemic.

I do not believe that eclampsia is due to the presence of fetus in utero, because, as I trace the history of the disease, I find that at least one-third of all cases occur after the uterus has been emptied—some of them coming on from ten days to two weeks after delivery.

In cases coming on several hours before delivery, I think Veratrum will stand you in hand better than any other remedy. It controls some of the most pressing symptoms; it lowers blood pressure; it acts upon the skin; and it brings the pulse down. My rule for giving it always has been to give a large dose hypodermatically every two or three hours until the pulse is brought down to normal, or nearly so, and then at longer intervals, but in sufficient doses to maintain its effects.

Dr. C. G. Broeman, Cincinnati, Ohio, in the June issue of the *Kentucky State Medical Journal*, presented some interesting facts concerning radium:

The author calls attention to the fact that the popular impression that radium treatments are very expensive is far from the truth. The patient saves considerable time and money because no extended sojourn to the hospital is necessary. There is very little interruption to his or her regular duties. Treatments are painless and there is no period of convalescence.

Radium is the ideal treatment for all forms of basal-celled epithelioma and for prickle-celled epithelioma if seen early enough and no glandular involvement is present.

In carcinoma of the lip it is the treatment of choice when the case is seen early.

Radium is to be preferred in certain uncomplicated cases of uterine fibroid and bleeding.

Radium should be universally used in cancer of the cervix and inoperable cancer of the body of the uterus.

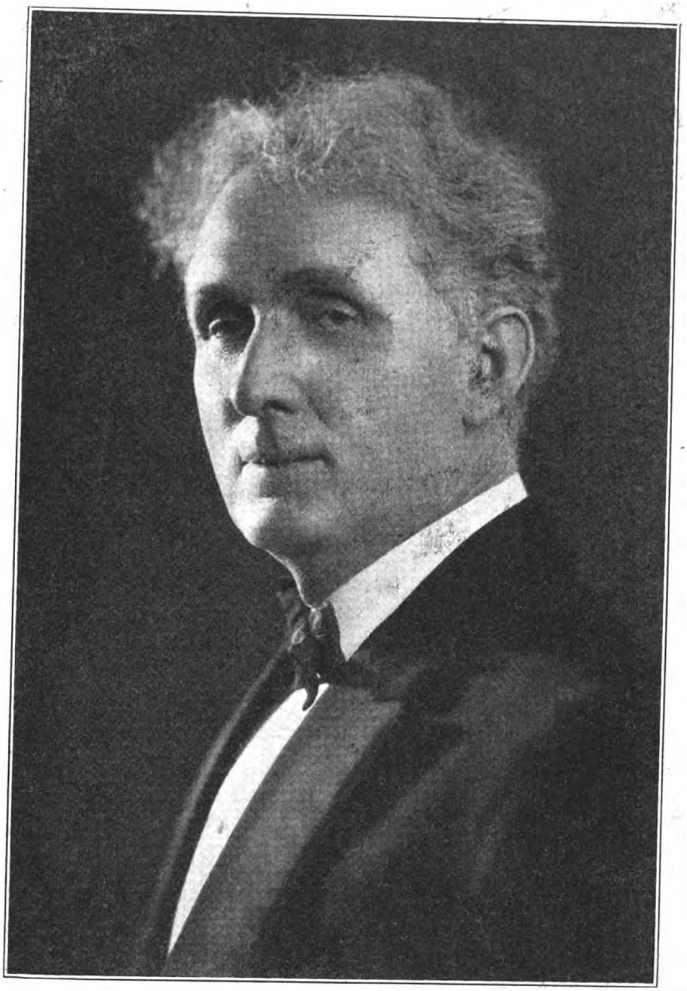
In all forms of inoperable cancer it relieves pain and hemorrhage and lessens discharge.

Radium is to be preferred to the x-ray in cases of goiter because of its exact dosage, deeper penetration and ease of application.

It is the preferred treatment in tuberculous adenitis and vernal or spring catarrh while in certain systemic diseases, such as splenomedullary leukemia, pernicious anemia, and Hodgkin's disease radium therapy has proved beneficial.

In dermatology radium improves and eradicates many heretofore stubborn and incurable dermatological conditions among which may be mentioned angioma, lymphangioma, keloids, lupus erythematosis and vulgaris, chronic eczema of the mucous membrane of the lips, warts, sycosis vulgaris, intractable pruritis, localized eczema, leucoplakia, extensive hypertrichosis and other skin affections.

From my own experience I feel justified in affirming that radium is here to stay and that the physician who is not willing to recognize its value in medical science is simply refusing to read the handwriting upon the wall.



DAVID ROSS
President of the Indiana State Medical Association, 1920-1921



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FIRST VICE PRESIDENT
HAMMOND



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CLAUDE S. BLACK
SECY. MEDICAL SECTION
WARREN

THE INDIANAPOLIS SESSION

The 1921 session of the Indiana State Medical Association will be held in Indianapolis, Wednesday, Thursday and Friday, September 28, 29 and 30, 1921. Indianapolis and its attractions as a meeting place for the Association are so well known to the members that a detailed description and write-up, as is the usual custom, is superfluous. Indianapolis is centrally located and easily accessible from all parts of the state. The medical men of that city are genial hosts, and extend a cordial greeting and welcome to the visiting doctors and their wives and friends.

PLACE AND TIME OF MEETINGS

The Claypool Hotel has been selected as general headquarters of the Association. There the members will register, and there also will be held all of the meetings of the Association.

On Wednesday afternoon at 4:30 o'clock the Council will hold its first meeting in the Palm Room. On Wednesday evening at 7 o'clock the House of Delegates will convene for its first meeting in the Palm Room. The final meeting of the Council will be held in the Palm Room Friday afternoon at 2 o'clock; and the second or final meeting of the House of Delegates will be held on Friday at 11 a. m. in the Riley Room. The smoker and get-together meeting on Wednesday evening will be held in the Assembly Hall of the Claypool Hotel, 8th floor, and the annual banquet on Thursday evening will be served at six o'clock in the Riley Room. The general meetings on Thursday morning and Friday afternoon have been assigned to the Assembly Hall on the eighth floor, and the Section on Surgery has been assigned to this same room for its meetings on Thursday afternoon and Friday forenoon. The Palm Room has been selected for the meeting place of the Section on Medicine, and the Florentine Room has been assigned to the Eye, Ear, Nose and Throat Section.

Special clinics have been arranged by the Indianapolis doctors for Wednesday afternoon at the following hospitals: Robert W. Long, Indianapolis City, Methodist, and St. Vincent's. Doctors desiring to attend are asked to notify the Committee on Arrangements in advance.

The Indiana University School of Medicine will serve a luncheon on Thursday noon at the University Building on West Michigan Street. The University also has taken over the Scientific Exhibit for this year, and this will be on display at the University Building during the entire session.

The visiting ladies will be entertained at the Circle Theatre and at a tea given at Dr. Ross' Country Place.



CHAS. N. COMBS
Terre Haute
Secre ary-Treasurer

REGISTRATION

Members are requested to register immediately on arrival in the city. The Registration Desk and Information Bureau will be located on the eighth floor of the Claypool Hotel. Registration will be by membership card, and to avoid delay and confusion members are urged to have their cards ready for inspection by the Registration Committee. Registering members are asked to indicate the number of ladies in the party so that the Committee on Entertainment may know early the number to be provided for. Badges will be furnished the members for identification. Letters and telegrams may be sent to the Claypool Hotel in care of the Committee on Registration.

HOTELS

The Claypool Hotel is the headquarters of the Association. Arrangements have been made to reserve one hundred rooms at this hotel for members of the Association. These reservations can be made through the Committee on Arrangements by addressing them at 422 American Central Life Building, Indianapolis, Indiana.

OFFICIAL CALL TO THE HOUSE OF DELEGATES

The next annual session of the Indiana State Medical Association will be held at Indianapolis, Wednesday, Thursday and Friday, September 28, 29, and 30.

The House of Delegates will be constituted as follows: Marion county, 7 delegates; Allen county, 2 delegates; Lake county, 2 delegates; St. Joseph county, 2 delegates; Vanderburg county, 2 delegates; Vigo county, 2 delegates; the other 78 counties each 1 delegate (two more paid-up memberships will entitle Delaware-Blackford county to one more delegate); the 13 councilors, the President, the Secretary of the Association, the Editor of THE JOURNAL, and the ex-presidents, namely Drs. Edwin Walker, G. F. Beasley, C. S. Bond, M. F. Porter, Sr., W. N. Wishard, J. C. Sexton, G. W. McCaskey, A. W. Brayton, J. B. Berteling, G. T. McCoy, D. C. Payton, Samuel Kennedy, W. F. Howat, A. C. Kimberlin, J. P. Salb, F. B. Wynn, G. F. Keiper, J. H. Oliver, J. R. Eastman, W. H. Stemm, C. H. McCully. Two other ex-presidents, Drs. Jonas Stewart and G. W. H. Kemper, are still living, but are retired.

Properly executed credentials for delegates should be sent to Dr. A. L. Marshall, Indianapolis, or brought to the session. No delegate will be seated unless wearing the official badge.

The House of Delegates will convene promptly at 7 p. m., Wednesday, September 28, in the Palm Room, Claypool Hotel; and again at 11 a. m., Riley Room, Friday, September 30.

The order of business will be as follows:

1. Call to order by President.
2. Roll call and seating of qualified delegates.
3. Reading minutes of previous meeting.
4. Report of Secretary-Treasurer.
5. Reports of standing committees: (a) Administration and Medical Defense; (b) Publication; (c) Public Policy and Legislation; (d) Medical Education; (e) Industrial and Civic Relations; (f) Health Problems in Education; (g) Hospital Standardization; (h) Scientific Work; (i) Scientific Exhibit; (j) Necrology; (k) Credentials; (l) Arrangements.
6. Reading of Communications.
7. Reading of memorials and resolutions.
8. Unfinished business.
9. New business.
10. Adjournment.

Election of officers will be the first order of business Friday at 11 a. m. In addition to the regular officers the terms of the following expire January 1, 1922, and their successors must be elected at this session: Delegates to the American Medical Association to succeed Albert E. Bulson, Jr., Fort Wayne; George W. Spohn, Elkhart; Alternates, C. D. Humes, Indianapolis, and B. D. Myers, Bloomington, to be elected for the ensuing two years. Delegates must have been members in good standing of this Association and of the American Medical Association for the past two years. Member of the Committee on Administration and Medical Defense, to succeed Dr. E. M. Shanklin, Hammond, for the ensuing three years. Member of the Committee on Hospital Standardization to succeed Dr. W. H. Stemm, North Vernon, for the ensuing five years.

Delegates from counties comprising the Second, Fifth, Eighth and Eleventh Districts are reminded that their councilors' terms will expire on December 31, 1921, and new councilors should be elected to succeed the following: Second District, J. B. Maple, Sullivan; Fifth District, Spencer M. Rice, Terre Haute; Eighth District, E. M. Conrad, Anderson; Eleventh District, G. G. Eckhart, Marion.

CHAS. N. COMBS, Secretary.

ANNOUNCEMENTS

The Shopping District is known to all who attend, and the stores and shops of Indianapolis will be glad to extend any reasonable courtesy.

Essayists are reminded that all papers presented before the Association become the property of the Association, and, therefore, are not to be published or submitted for publication elsewhere than in THE JOURNAL of the Indiana State Medical Association.

Wednesday evening will be given over to the annual smoker and general get-together meeting of the session. There has been provided an interesting program—perhaps not too serious in nature but of such character to make one forget his usual self and enjoy the lighter moments for an hour or two.

The members and those accompanying them are requested to register upon their arrival. The bureau of information and registration is in the Claypool Hotel. Present your membership cards when registering. Members without their cards may register after their standing has been verified by consulting the records.

The election of officers will be the first order of business at the meeting of the House of Delegates held Friday at 11 a. m. No member of the House of Delegates is eligible to office, and delegates to the American Medical Association must have been members in good standing of the A. M. A. for the past two years.

You are requested to wear the official badge which is supplied when you register, when attending or participating in the meetings. Members of the House of Delegates will have designating badges. Only those who are accredited delegates are entitled to vote at the meetings of the House of Delegates, or even to address the House of Delegates without special permission.

The Annual Dinner will be held Thursday evening in the Riley Room of the Claypool Hotel. This will be one of the most important features of the session. Surgeon General of the Army, Merritt W. Ireland, will be the speaker of the evening, and needs no introduction to the medical profession of Indiana. Being a Hoosier it is needless to say that he will be greeted by a large audience.

Register early. The booth for registration will be open Wednesday afternoon at one o'clock, and be open throughout the session. Please have your pocket cards with you in order to avoid delay in registration. If you have paid your dues to your county society secretary *only recently*, and have not yet received your membership card, present a receipt from the county secretary and you will be permitted to register. Please get your badge and wear it.

The Indiana University School of Medicine will serve a luncheon at the University Building—West Michigan street—at 12:30 p. m. Thursday. There will be provision made for transportation to and from the luncheon, providing at the time of registration the members indicate their desire to attend. There will be further information furnished by a representative of the School who will be in attendance during Wednesday afternoon and Thursday morning.

Essayists should bear in mind that their papers as presented at the Indianapolis session represent copy for THE JOURNAL, and accordingly the title and full name and address of the essayist should appear at the top of the manuscript, and the body of the manuscript *should be carefully edited*. Attention to the paragraphing, punctuation, capitalization and grammatical construction of sentences will go a long way toward helping the editor and printers. All manuscripts should be typewritten.

The Local Committee on Arrangements reports that the medical profession of Indianapolis has arranged a series of clinics to be conducted by members of the Indianapolis Medical Society to be held on Wednesday afternoon, September 28. It is urged that those wishing to attend these clinics send their names to the Committee on Arrangements so that proper provision can be made for caring for all who wish to attend. The following hospitals have made arrangements for the clinics: Robert W. Long Hospital, Indianapolis City Hospital, Methodist Hospital, St. Vincent's Hospital. The Committee on Arrangements is as follows: Drs. C. H. McCaskey (Chairman), C. D. Humes, Alfred Henry, A. B. Graham, Robert M. Moore.

There will be ample entertainment for the ladies during the entire session. Those who arrive Wednesday will be cared for providing their names are given to the registrar during the afternoon. This will give the committee an idea of the number to be cared for and the committee will be pleased to see that all visiting ladies are properly entertained. Seats at the Circle Theater will be provided visiting ladies and all are invited to a tea at Dr. Ross' country place. The local committee in charge is as follows: Mrs. C. H. McCaskey (Chairman), Mrs. Homer Hamer, Mrs. Ross Ottinger, Mrs. George Kohlsteadt, Mrs. Chas. F. Neu, Mrs. Alfred Henry, Mrs. M. J. Barry, Mrs. Chas. E. Cottingham, Mrs. E. B. Mumford, Mrs. Virgil Moon, Mrs. Bernard Erdman, Mrs. Edgar Kiser, Mrs. Frederick Warfel, Mrs. D. O. Kearby, Mrs. Ed Clark, Mrs. John F. Eberwein, Mrs. A. B. Graham, Mrs. Helen Hare, Mrs. C. P. Emerson, Mrs. W. D. Gatch, Mrs. Fred Pettijohn, Mrs. O. C. Lukenbill, Mrs. R. O. McAlexander, Mrs. E. D. Clark, Mrs. John H. Oliver, Mrs. J. W. Carmack, Mrs. P. E. McCown, Mrs. Frank B. Wynn.

CONDENSED PROGRAM

Wednesday, September 28

AFTERNOON

Meeting of the Council, at 4:30 p. m., Palm Room, Claypool Hotel.

EVENING

Meeting of House of Delegates, 7 o'clock, Palm Room, Claypool Hotel.

Informal smoker and get-together meeting, 8 o'clock, Assembly Hall, 8th Floor, Claypool Hotel.

Thursday, September 29

FORENOON

General Meeting, 8:30 a. m., Assembly Hall, 8th Floor, Claypool Hotel.

No section meetings.

AFTERNOON

Meeting of Section on Surgery, 2 p. m., Assembly Hall, 8th Floor, Claypool Hotel.

Meeting of Section on Medicine, 2 p. m., Palm Room, 9th Floor, Claypool Hotel.

Meeting of Eye, Ear, Nose and Throat Section, 2 p. m., Florentine Room, 2d Floor, Claypool Hotel.

EVENING

Annual Banquet, 6 o'clock, Riley Room, Claypool Hotel, Surgeon General of the Army, Merritt W. Ireland, to be the guest of honor and speaker of the evening.

Friday, September 30

FORENOON

Meeting of Section on Surgery, 9 a. m., Assembly Hall, 8th Floor, Claypool Hotel.

Meeting of Section on Medicine, 9 a. m., Palm Room, 9th Floor, Claypool Hotel.

Meeting of Eye, Ear, Nose and Throat Section, 9 a. m., Florentine Room, 2d Floor, Claypool Hotel.

Meeting of House of Delegates, 11 a. m., Riley Room, Claypool Hotel.

AFTERNOON

Meeting of Council at 2 p. m., Palm Room, Claypool Hotel.

General Meeting, 2 p. m., Assembly Hall, 8th Floor, Claypool Hotel.

OFFICIAL PROGRAM OF THE ANNUAL SESSION OF THE INDIANA STATE MEDICAL ASSOCIATION

TO BE HELD AT INDIANAPOLIS,

SEPTEMBER 28, 29, 30, 1921.

HOUSE OF DELEGATES

First meeting, Palm Room, Claypool Hotel, Wednesday evening, September 28, at 7 o'clock.

Second meeting, Riley Room, Claypool Hotel, Friday morning, September 30, at 11 o'clock.

COUNCIL

First meeting, Palm Room, Claypool Hotel, Wednesday afternoon, September 28, at 4:30 o'clock.

Second meeting, Palm Room, Claypool Hotel, Friday afternoon, September 30, at 2 o'clock.

Additional meetings at the call of the President of the Council.

GENERAL MEETINGS

(ASSEMBLY HALL, EIGHTH FLOOR, CLAYPOOL HOTEL)

Thursday, September 29, 8:30 a. m.

Friday, September 30, 2 p. m.

SECTION ON SURGERY

(ASSEMBLY HALL, EIGHTH FLOOR, CLAYPOOL HOTEL)
Thursday, September 29, 2 p. m.
Friday, September 30, 9 a. m.

SECTION ON MEDICINE

(PALM ROOM, NINTH FLOOR, CLAYPOOL HOTEL)
Thursday, September 29, 2 p. m.
Friday, September 30, 9 a. m.

SECTION ON EYE, EAR, NOSE AND THROAT

(FLORENTINE ROOM, SECOND FLOOR, CLAYPOOL HOTEL)
Thursday, September 29, 2 p. m.
Friday, September 30, 9 a. m.

COMMERCIAL EXHIBITS

(EIGHTH FLOOR, CLAYPOOL HOTEL)
Wednesday noon to Friday night.

SCIENTIFIC EXHIBIT

(INDIANA UNIVERSITY SCHOOL OF MEDICINE BLDG.)
Wednesday noon to Friday night.

REGISTRATION

(EIGHTH FLOOR, CLAYPOOL HOTEL)
Wednesday afternoon.
Thursday and Friday.

ENTERTAINMENT

Wednesday, September 28, 8 p. m., smoker and get-together meeting, Assembly Room, eighth floor, Claypool Hotel.

Thursday, September 29, 12:30 p. m., luncheon at Indiana University School of Medicine, West Michigan street.

Thursday, September 29, 6 p. m.; Banquet, Riley Room, Claypool Hotel.

Entertainment for the ladies—seats at Circle Theater; Tea at Dr. Ross' Country Place.

SCIENTIFIC PROGRAM

GENERAL MEETINGS

(ASSEMBLY HALL, EIGHTH FLOOR, CLAYPOOL HOTEL)

Thursday, 8:30 A. M.

Organization.

Address of Welcome.

Address of President, Dr. David Ross, Indianapolis.

SYMPOSIUM: ULCER OF THE STOMACH AND DUODENUM

1. B. W. RHAMY, Fort Wayne.

Subject: Ulcer of the Stomach and Duodenum: Etiology and Pathology.

Abstract.—Prevalence, question of age, and location. Pathology of lesions described. Association of gastric and duodenal ulcers.

Percent of lesions in various locations. Possible etiologic factors:

Bacterial origin, endarteritis, hyper-acidity, arteriosclerosis, trauma, diet, anemia, thrombosis, loss of tissue immunity and nerve lesions.

Relation of syphilis to gastric ulcer.

Essential factor is localized loss of vitality permitting auto digestion.

2. W. H. FOREMAN, Indianapolis.

Subject: Ulcer of the Stomach and Duodenum: Diagnosis and Medical Treatment.

Abstract.—The diagnosis and treatment of gastric and duodenal ulcer is considered from the standpoint of gastric secretion, motility and pain. Gastric secretion is influenced by so many factors outside the stomach, that the amount and character of secretion give little knowledge of the pathology in the stomach. While chemical analysis is of little value in diagnosis yet it is important in treatment. Gastric symptoms are motor rather than secretory. Interpretation of gastric motility requires consideration of many factors in and out of the stomach. Roentgenograms are of minor value; the fluoroscope is of major value. Motor dysfunction may be treated direct or indirect.

Visceral structures are not susceptible to ordinary stimuli which produce pain in somatic structures. Pain and the variability of pain in ulcer are due to visceral tone and irritability rather than to the contact of variable per cents of free acid with the ulcer *per se*. Various types of epigastric pain are diagnosed as ulcer pain. Relief of pain is not a safe guide in treatment.

3. T. B. NOBLE, Indianapolis.

Subject: Ulcer of the Stomach and Duodenum: Indications for Surgical Treatment.

Abstract.—The things indicated in the treatment of peptic or duodenal ulcer are best understood by visualization of the pathological changes leading up to its production, and the sequences attending and following its production.

Broadly considered there are two periods in the life history of gastric ulcer: The first might be designated as the period leading up to the production of the ulcer, and the second the period during which the ulcer is in actual existence.

Logically and rightly the internist is entitled to the first period, but the second belongs to the surgeon as it deals with a condition which does not tend to heal and remain so, but leads to conditions which impair the health and usefulness of the individual as well as to the destruction of life.

4. J. R. EASTMAN, Indianapolis.

Subject: Ulcer of the Stomach and Duodenum: Surgical Technique (Lantern Slides).

Abstract.—Historical review—Anatomic and Physiologic conceptions of operative procedures—Effects of heat—Methods of Suturing—Avoidance of post-operative accidents, etc.

Discussants: Miles F. Porter, Fort Wayne; A. B. Graham, Indianapolis; W. D. Asbury, Terre Haute; E. D. Clark, Indianapolis.

5. CHARLES P. EMERSON, Indianapolis.

Subject: Treatment of Chronic Nephritis.

Abstract.—In the treatment of that large group of cases which come under the name "Chronic Nephritis" the diversity of etiology should be carefully studied, remembering that in all cases the real condition is only a small part of a more general disease or diseases. In each case the frequent occurrence of acute exacerbations deserves especial attention since these show clearly that the cause is still operative and should, if possible, be removed. A careful consideration of the manner of life and diet is essential.

Discussants: G. W. McCaskey, Fort Wayne; E. F. Kiser, Indianapolis.

Friday, 2 P. M.

1. H. R. ALLEN, Indianapolis.

Subject: The Treatment of Club Feet.

Abstract.—Every congenital club foot is characterized by four constantly present foot deformities, namely, adduction, cavus, equinus, and varus. The permanent and perfect restoration of the deformity as a whole depends upon the restoration of its parts.

Instruments found useful in correcting and maintaining the correction in the extreme possibilities of normal range of position will be demonstrated, together with the essential position of keeping the foot and femur parallel and the popliteal angle always less than a right angle, during the early period of treatment. In this system of treatment no bones are ever cut or broken, but their deformed positions

are rendered normal by releasing the shortened, soft, deformed tissues that are responsible for maintaining the deformity. Normal feet without substituting one deformity for another is the rule under this system in all cases varying in age from six hours to over sixty years.

Discussants: M. I. Rosenthal, Fort Wayne; G. D. Marshall, Kokomo.

2. G. B. JACKSON, Indianapolis.

Subject: Sterility in the Female.

Abstract.—DEFINITION:—Broadly, that condition of the organism which renders the individual incapable of reproduction.

CLASSIFICATION:

1. Primary, absolute, or idiopathic.
2. Secondary, relative, or acquired.

Essentials for fecundity enumerated and the two different classes of sterility discussed.

Emphasis upon:

1. Prevention as related to eugenics—education.
2. Importance of venereal diseases and the male.
3. "Better Obstetrics."
4. Endocrine system.
5. Surgery of the condition.

Discussants: Arnold Province, Franklin; O. G. Pfaff, Indianapolis.

3. E. B. MUMFORD, Indianapolis.

Subject: The Treatment of Compound Fractures.

Abstract.—In the past, compound fractures have been considered as potentially infected wounds and all lines of treatment have been directed to combat this infection. To this end the wound has been cleaned with some antiseptic solution and drains have been inserted to take care of any infection which might be left or develop later in the wound.

The treatment of open wounds as developed through the surgery of the World War taught us that the infection which occurred in this type of lesion was due largely to the retention of devitalized tissue which offered a wonderful growing medium for pathogenic bacteria and which, if removed, would leave only fresh, healthy tissue, capable of combatting and overcoming the small number of bacteria left. With this teaching in mind, the treatment of compound fractures in civil life should have all of its efforts directed, first to the removal of all devitalized tissue upon which infection could develop, and, secondly, to the closure of the wound without drains in order to prevent any secondary infection.

Compound fracture wounds, due either to direct or to indirect force, whether large or small, should be opened wide under an anesthetic, all devitalized or bruised tissue, except pieces of bone, freely excised, the fracture reduced, the layers of soft tissue sutured as nearly as possible in their normal relationship, and the wound closed tight without drains.

In the writer's series of cases all compound fractures with but one exception were thus converted into simple fractures without infection.

Discussants: H. O. Bruggeman, Fort Wayne; L. A. Ensminger, Indianapolis.

4. W. U. KENNEDY, Newcastle.

Subject: Traumatic Abdominal Injuries.

Abstract.—After a brief discussion of visceral injury caused by external force producing perforation or laceration, a hitherto undescribed type of abdominal injury caused by external trauma, acting by concussion and producing adhesive peritonitis, is discussed, with case reports.

This type of injury having the early signs of shock, nausea and muscular rigidity, the shock subsiding but the other symptoms persisting, followed later by evidences of intestinal adhesion and obstruction.

The pathology being that of congestive hyperemia induced by disturbance of the sympathetic, with exudate and agglutination, and without sepsis.

The possibility of traumatic appendicitis is recognized and the medico-legal aspects of such injuries in producing varied intestinal disturbances, all having as a basis, intestinal constriction by adhesions, is discussed.

Discussants: E. C. Davidson, Lafayette; W. P. Williams, Lebanon.

SECTION ON MEDICINE

(PALM ROOM, NINTH FLOOR, CLAYPOOL HOTEL)

Thursday, 2 P. M.

1. JAMES L. GILBERT, Logansport.

Subject: Theory and Practice of Immunology.

Abstract.—Review of outstanding points in history of immunity; also the contributors with their contributions. The reaction found in the process of immunity, together with the nomenclature. The application of immunity in the prevention and treatment of disease.

Discussants: B. W. Rhamy, Fort Wayne; Frank B. Wynn, Indianapolis.

2. W. A. FANKBONER, Marion.

Subject: Epidemic Encephalitis.

Abstract.—Individual symptoms appear in many other diseases. The symptom—complex and general clinical phenomena do not adapt themselves to our understanding of the ordinary phases and progress of similar disorders. These features together with a fairly distinctive pathology and a suspected epidemiology permit the designation "Epidemic Encephalitis" and justify in a degree that we speak of it as a new disease.

History suggests its occurrence in the remote past. Reliable recognition since 1917.

Etiology not definite. Likely a specific virus.

Pathology fundamentally vascular. Restricted in intensity to basal ganglia, mid-brain pons and medulla. Petechial hemorrhages sometimes larger. Cellular infiltration into white matter. Sometimes affecting gray matter.

Symptoms may range widely; but chiefly in cranial nerve distribution especially with the third, fourth, sixth and seventh.

Twenty-five percent of cases will present difficulties in diagnosis.

Treatment largely management.

Discussants: E. O. Daniels, Marion; Clay Ball, Muncie.

3. MAURICE H. KREBS, Huntington.

Subject: Foreign Bodies Within the Respiratory Tract as Causative Factors in the Production of Pathological Conditions.

Abstract.—Undiagnosed and unsuspected presence of foreign bodies causative factors in croup; so-called pneumonia, bronchiectasis, abscess. Case reports. Simulating tuberculosis; case report. Classification of foreign bodies. Anatomical consideration. Symptoms. Early cases. Long standing cases. Historical notes. Exhibit of plates, prints, slides. Instrumentarium. Conclusions.

Discussants: Alfred Henry, Indianapolis; C. A. Sellers, Hartford City.

4. JANE KETCHAM, Indianapolis.

Subject: Eclampsia.

Abstract.—Eclampsia is one of the most important subjects confronting obstetricians at the present time. One reason is that the true nature of the disease is not known. Many theories as to its causation have been advanced and much learned as to its prevention, but the true nature is unknown. Theories are, toxemia from either bowels or kidneys; endocrine disturbance, or protein poisoning (Abderhalden). Prodromes, subjective and objective. Much was to be hoped from newer blood chemistry, nothing very satisfactory as yet. We cannot differentiate between true eclampsia and uremia of purely kidney origin. Prenatal care important. Use of sphygmomanometer and opthalmoscope should be routine, as well as urine examinations. Urine examination should include comparison of output and intake, night and morning urine, and in doubtful cases a complete blood examination, urea creatinine, etc., should be done, not only for knowledge of individual case but looking to knowledge of future cases.

Discussants: F. R. Clapp, South Bend; Chas. S. Bond, Richmond.

5. CHAS. G. BEALL, Fort Wayne.

Subject: Functional Nervous Disturbances in Soldiers and Civilians.

Abstract.—Is there such a condition as a functional disease? Opinions past and present. Diagnosis must be based on present knowledge. Progress. Importance of subject from statistical standpoint. Older classifications. Modern classifications. Importance of establishing definite diagnosis. Pre-disposing causes. Danger of suggestion. Methods. Signs and symptoms. Treatment; moral; physical, and other methods.

Discussants: W. D. Asbury, Terre Haute; John H. Gilpin, Fort Wayne.

Friday, 9 A. M.

1. ARLIE R. BARNES, Rochester, Minn.

Subject: Bacteria Recovered Post-Mortem.

(No Abstract.)

Discussants: Virgil Moon, Indianapolis; Geo. W. McCaskey, Fort Wayne.

2. R. V. HOFFMAN, South Bend.

Subject: Some Problems in Syphilis.

Abstract.—Prevalence of syphilis. Wasserman test must be supported by clinical evidence. A brief, adequate routine examination. Status of serological tests. Predicted advances in treatment. Curability. To what degree is federal, or state, participation necessary.

Discussants: A. W. Brayton, Indianapolis; Wm. S. Ehrich, Evansville.

3. JOHN W. SLUSS, Indianapolis.

Subject: Infections of the Gall Bladder.

Abstract.—Failure of present-day practice properly to estimate the importance of the liver in relation to deranged metabolism. Review of its functions and estimation of its products. Significance of urobilin and cholesterol. Relation between diet, cholesterol and lymphoid defense. Genesis of gall stones and the precedence of infection. The bacteriology of cholangitis and cholecystitis. "Billiousness".

The practical application of these observations is that it is imposed upon us to associate the idea of infective change in the bile passages, with functional derangement of the body at large; to reconstruct our notions of all that the old term "billiousness" connotes; to devise a more alert symptomatology and so anticipate and prevent serious surgical conditions. Prophylaxis specially concerned with diet. Pregnancy and foci of infection. Character of early tissue change in cholangitis often escapes notice at operation and post mortem. The value of drainage, medical and surgical.

Discussants: W. D. Asbury, Terre Haute; W. C. Heilman, Newcastle.

4. GEORGE W. SPOHN, Elkhart.

Subject: The Physical Inequality of School Children.

Abstract.—The children of the rich, the middle class and the poor all attend the same school. Why the differences?

Parents desire their children as fit for school work as any in the schoolroom.

Infections, malnutrition and obstructions to normal physiological functions are physical defects.

Do the nurses who examine the school children favor any physicians or do they select the most efficient to do the corrective work?

Is the restless feeling of members of the profession due to private interests of a few in and out of the medical profession?

Discussants: Ada E. Schweitzer, Indianapolis; George W. Cring, Portland.

5. CHARLES S. WOODS, Indianapolis.

Subject: Professional Efficiency in the Hospital.

Abstract.—First: There is a very great difficulty in getting the attention of Board of Trustees to the importance of maintaining the highest professional standards in the institution. This is due to the fact that they rather consider that their task is to provide finances, equipment, and buildings. It is necessary to insist that the Board of Trustees is responsible for the professional care of the patient in the hospital.

Secondly: Laboratories (Clinical, X-Ray, and Dietetic). The institution must maintain well equipped and thoroughly manned laboratories. The attending physicians should use these laboratories because in many instances they cannot make a good diagnosis without their help. No institution can do good professional work that does not encourage thorough laboratory study of cases. The house physicians and interns should be guided entirely by the principle of service to the patient rather than advantage to themselves, or to attending men. The best intern is he who is most devoted to the care of the patient.

Thirdly: The surgeries, which are laboratories in which the surgeon carries out, according to well recognized technique, certain surgical principles, should be thoroughly equipped. The process of sterilization and the technique should be as nearly perfect as possible. Accidents such as infections and deaths from anesthetics must be reduced by the most rigid application of certain principles. Sterilization is often a matter of guess work. Incomplete sterilization as revealed by bacteriological cultures are rather common. The entire organization of the surgeries should be impressed with the very serious duty of preventing accidents of any kind. Anesthetics are generally badly given. Trained anesthetists should decide the important question of the kind and degree of anesthesia, also whether there is a hazard in connection with the administration of the anesthesia.

Fourthly: The nursing is of two kinds, professional and non-professional. The professional nursing should be thoroughly well done. Professional nursing means more than the mere care of the patient. It is really a part of the scientific management of the case. The training school, therefore, must be

fundamentally an educational institution, and if it is not that, obviously professional nursing of the highest type is likely to be only a matter of theory.

Fifthly: The institution must, in view of the above, determine who shall attend patients in it. There are those who seek to take from the authorities the privilege and obligation to do this.

Discussants: H. G. Hamer, Indianapolis; A. C. Kimberlin, Indianapolis.

SECTION ON SURGERY

(ASSEMBLY HALL, EIGHTH FLOOR, CLAYPOOL HOTEL)

Thursday, 2 P. M.

1. H. K. BONN, Indianapolis.

   Subject: Operative Injury of the Hepatic and Common Bile Ducts. Methods of Avoidance and Repair.

Abstract.—The types of cystic ducts. Anomalies of the hepatic ducts. Anomalies of the biliary blood vessels. The varying relationships of the hepatic duct and artery, the portal vein, and the common duct. Classification of operative duct injuries. Methods of repair. Methods of avoidance of duct injuries. General factors of safety.

Discussants: H. O. Shafer, Rochester. Goethe Link, Indianapolis.

2. W. H. BAKER, South Bend.
   M. W. LYON, JR., South Bend.

   Subject: Cecal Tuberculosis. Slides.

Abstract.—The condition is usually treated in most works on surgery and pathology, but cases are comparatively rarely seen as judged by published reports. Condition often probably mistaken for true neoplasm. Gross appearance of a typical form. Microscopic comparisons in and about lesion. In reported cases the preoperative diagnosis is seldom stated. By the use of the microscope may the diagnosis be confirmed. Treatment is surgical. Immediate post-operative mortality is about 20 percent. Report of case with pre- and post-operative conditions.

Discussants: Vance A. Funk, Vincennes; J. H. Eberwein, Indianapolis.

3. M. N. HADLEY, Indianapolis.

   Subject: Local Anesthesia as a Supplement to General Narcosis.

Abstract.—The use of local anesthesia in surgery should be regarded as a supplement to general narcosis. The limitations of its usefulness should be carefully studied and an attempt made to standardize its indications. Every surgeon should familiarize himself with the technique of local anesthesia so that when indicated it may be used successfully.

A drug to be used successfully as a local anesthetic must possess three qualities: it must be relatively non-toxic; it must be non-irritating to the tissues, and it must have anesthetizing properties sufficient to desensitize the tissues. Novocain meets all these requirements and is, when combined with adrenalin, an ideal local anesthetic.

The psychology of the surgeon who always has operated under general narcosis will undergo considerable alteration when he begins the use of local anesthesia. Blood vessels, nerves and the tissues of the body will have a new significance.

The greatest obstacle to successful local anesthesia is not in the ability to do a painless operation, but in the control of the psychic factors. All noxious mental stimuli must be excluded.

Discussants: A. C. Arnett; Lafayette; Frank Armstrong, Danville.

4. JAMES Y. WELBORN, Evansville.

   Subject: Conclusions from My Experience in Appendicitis.

Abstract.—Report of a large number of cases occurring in the practice of Dr. Walker and myself. Classification according to age, suppurative conditions and end results. Various facts gained by personal experience.

Discussants: H. W. McDonald, Newcastle; G. D. Scott, Sullivan.

5. A. S. JAEGER, Indianapolis.

   Subject: Notes on the Treatment of Septic Infection Following Delivery or Abortion.

Abstract.—Successful treatment depends upon a careful study and correlation of certain diagnostic points, as follows: Past history, as to previous pelvic disease, gonorrhea, lues, malaria, etc. Is the present infection an acute flare-up of a chronic condition, or an acute primary infection? Patient's condition during pregnancy. *Status Praesens*: Focal infections; possible causative factors; time of appearance and type of symptoms. Local symptoms and general systemic reaction. Information gained from local examination. Need of careful laboratory cooperation in examination of local discharges, blood, urine, etc. If infection has passed the bounds of the uterus, and pelvic structures are involved, there is more or less progressive peritonitis and undoubted constitutional involvement. Any major local operation is of little avail, and is in fact dangerous. At most a careful removal of free material from the uterus, and if indicated some method of drainage, is all that should be done. The treatment must be constitutional.

When the infection is still local, then the uterus should be emptied of foreign material and thoroughly cleansed with Tr. Iodine solution. A curette should *never* be used. Drainage should be maintained when indicated by means of a fenestrated rubber tube well in the body of the womb, and frequent irrigations of alcohol, normal salt or hypertonic salt solution. Constitutional treatment should consist of proctoclysis of sodium bicarb, glucose and normal salt solution, before and after operative interference, anti-streptococcic serum if indicated, normal horse serum and best of all human blood transfusion. Drugs such as sodium salicylate, quinine, etc., may be of value.

Patient should be placed in Fowler position as soon as possible to promote drainage. For peritoneal involvement opium in form of rectal suppository has proven best. Conservatism and individualism should be the keynote of all treatment, and the curette should never be used.

Discussants: Jos. H. Weinstein, Terre Haute; Frank S. Holland, Bloomington.

Friday, 9 A. M.

1. P. E. MCCOWN, Indianapolis.

   Subject: Non-Tuberculous Infection of the Kidney. Slides.

Abstract.—The kidney as an excretory organ is of necessity affected by the general diseases of the body. Infections of the nose, throat, apical abscesses of the teeth, appendicitis and intestinal fermentation or any non-draining focalized infection give up bacteria and toxins which are at least partially eliminated thru the renal tubules.

Pyelitis in pregnancy is usually easily recognized, but pyelitis in infancy is very commonly overlooked. This paper deals largely with the symptoms and diagnosis of this condition with the idea to stimulate an early recognition of the same.

It is accompanied by a series of radiographic lantern slides showing the various degrees and alterations of the kidney structure during the progress of this infection.

Discussants: Charles Barnett, Fort Wayne; Bernard Erdman, Indianapolis.

2. J. H. OLIVER, Indianapolis.
V. H. MOON, Indianapolis.
Subject: Osteitis Fibrosa and Osteitis Fibrosa Cystica.

Abstract.—Clinical history and pathology; general treatment and prognosis; report of three cases and history of one from practically the beginning to date, with skiagraphs every six months for six years showing trouble in the head and neck of the right femur, progressively involving the whole extent of the bone; and five years later beginning trouble in the upper end of the shaft and neck of the left femur.

Discussants: Chas. M. Mix, Muncie; Frank B. Wynn, Indianapolis.

3. STANLEY A. CLARK, South Bend.
Subject: The Treatment of Cancer of the Uterine Cervix.

Abstract.—Earnest consideration should be given to the question of operative versus radium treatment of carcinoma of the cervix uteri.

Examination of literature shows surgeons generally are much dissatisfied with the operative treatment, both as to immediate and ultimate results.

Radium treatment is apparently more desirable for palliation; and experience, for the brief period radium has been available, encourages its more extensive use with the hope of cures.

Discussants: Grace Line Homan, LaPorte; George Kohlstadt, Indianapolis.

4. W. D. GATCH, Indianapolis.
Subject: Some Notes on the Surgery of the Mandible. Slides.

Abstract.—Injuries, infections, and new growths considered.

In treatment of injuries, underlying principles are avoidance of antiseptics, thorough cleansing of wound, and radical conservatism.

When is a tooth infected? How much should be done when a tooth is pulled? Ill results of some recent practices.

New growths—a classification of the various forms involving the jaws; their diagnosis, prognosis, and treatment.

Discussants: W. R. Davidson, Evansville; J. C. Sexton, Rushville.

EYE, EAR, NOSE AND THROAT SECTION

(FLORENTINE ROOM, SECOND FLOOR, CLAYPOOL HOTEL)

Thursday, 2 P. M.

1. W. A. HOLLIS, Hartford City.
Chairman's Address: Some Professional Shortcomings.

2. C. NORMAN HOWARD, Warsaw.
Subject: Report of a Case of Bezold's Mastoiditis, Preceded by Thirty Years of Middle Ear Suppuration.

Abstract.—Brief review of Bezold's original article of 1881, describing this type of mastoiditis.

Frequency of its occurrence in more recent years.

Report of a case which followed thirty years of middle ear suppuration. Invasion of mastoid. Breaking through of inner plate of tip of mastoid into deep structures of the neck. Subjective mastoid symptoms almost entirely lacking. Patient came seeking relief from pain and swelling in neck. Findings at operation. Bacteriology. Result to date.

Discussant: E. J. Lent, South Bend.

3. J. N. STUCKY, Lexington, Ky.
Subject: Some Phases of the Trachoma Question.

(No abstract.)

Discussant: E. M. Shanklin, Hammond.

4. D. O. KEARBY, Indianapolis.
Subject: What the General Practitioner Can Do in Otology.

Abstract.—Acute otitis media and its complications. The need of recognizing clearly that a space of time exists between infection and complication, and this is the logical time for advice and treatment to secure perfect results.

The reason for the general practitioner's lack of enthusiasm for otology. Inadequate instruction in this and allied subjects during student and intern days. Indifference and neglect by the laity of all ear conditions except the most obvious and painful affections.

Our obligations as teachers of the public. A text should be a part of the public school curriculum.

Case reports and statistics of complications that might have been prevented had the patient been sufficiently educated to consult the physician early, that is, during the pre-complicated stage of the disease.

Discussant: George W. Spohn, Elkhart.

Election of Section Officers.

Friday, 9 A. M.

1. HARRY BOYD-SNEE, South Bend.
Subject: The Clinical Picture of Streptococcic Osteomyelitis of the Temporal Bone.

Abstract.—The paper sets forth the pathological and bacteriological findings which support the diagnosis. Clinically the cases have been classed: (1) Diagnosis; acute, uncomplicated streptococcic osteomyelitis of the temporal bone, manifesting clinically as acute, suppurative otitis media without variation. (2) Diagnosis; acute, complicated, suppurative streptococcic osteomyelitis of the temporal bone; the symptomatology is variable and will coincide with whatever complication, single or multiple, which supervenes. Class 2 comprehends the regional complications, extracranial and intracranial, which develop by direct extension of the inflammatory process from the primary focus of infection in the temporal bone, and the remote complications which supervene through blood stream infection. This classification is based on clinical, pathological and bacteriological findings, further supplementary corroborative autopsy findings were available in 22 instances. The classical symptomatology of acute, suppurative mastoiditis is no guide in the diagnosis of this *atypical* phenomenon, *any* or *all* of the signs may be wanting in a case.

Discussant: O. C. Breitenbach, Columbus.

2. WM. F. MOLT, Indianapolis.
Subject: Ludwig's Angina, Complicating Acute Suppuration of the Parotid Gland.

Abstract.—This paper deals particularly with the necessity of early and free drainage; describing in detail the method of drainage for the different regions involved, and illustrated by a sketch diagram showing the exact region and glands involved, as well as the lines of incision for each.

Photographs are shown of the wound the fourth day after operation, together with the presentation of the patient, showing very slight scarring.

Discussant: D. F. Berry, Indianapolis.

REPORT OF THE SECRETARY

House of Delegates, Indiana State Medical Association:

Gentlemen: For the first eight months of the fiscal year 1921, I am very happy to report that the number of paid up members is now 2,571, which is in excess of the total membership for last year, and with the usual number who pay about the time of the annual session, expect to make a banner year for the Association. In another column in this issue of THE JOURNAL, as well as previous issues of this year, you will find a list of the counties that have made the best showing, namely, those who have increased their membership ten percent or better over last year.

The secretary of the American Medical Association has notified us that Dr. G. W. H. Kemper by reason of his long time membership in the American Medical Association is eligible to be made an Affiliate Fellow by action of the House of Delegates at the annual session at St. Louis, May, 1922. The only qualification required is that the Indiana State Medical Association elect Dr. Kemper to honorary membership. Since Dr. Kemper is not now an active member of this Association, he can be made an honorary member in accordance with Section 5, Article IV of the constitution when so elected by this House of Delegates. The high esteem in which we all hold Dr. Kemper makes it unnecessary for the secretary to urge any action, as even this would be very slight recognition of the years of service which he rendered us.

The secretary wishes again to remind the House of Delegates to exercise care in electing the officers of this Association. Members should not be elected to positions of trust who are not able and willing to discharge their obligations. A recent instance is the fact that a delegate to the American Medical Association, elected for two years, did not attend either of the two sessions.

The secretary was interested in looking up how many of the present county secretaries have been serving continuously during the past twelve years of his incumbency, and finds that only three are still remaining: Dr. G. D. Miller of Logansport, Dr. W. T. Lawson of Danville and Dr. Allen Pierson of Spencer. Dr. W. R. Quick of Delphi was secretary all of that time except the year 1920. Of these secretaries who have worked so continuously and faithfully in maintaining their organization, the palm must certainly be awarded to Dr. Allen Pierson, who has been secretary continuously of the Owen County Medical Society for the past forty years, beginning in 1882. I venture to predict that this is a record of service that will hardly be equaled by any other secretary, and is a distinction of which Dr. Pierson has reason to be proud. Without the labors of the county secretaries who work year in and year out devoid of compensation, this organization could not grow as it has, nor would it be possible to perpetuate it.

Respectfully submitted,

CHARLES N. COMBS, Secretary.

REPORT OF THE COMMITTEE ON ADMINISTRATION AND MEDICAL DEFENSE, INCLUDING THE REPORT OF THE TREASURER

House of Delegates, Indiana State Medical Association:

Gentlemen: Due to the fact that our former executive secretary, Mr. Frederick E. Schortemeier, resigned the first of this year as attorney for the Medical Defense Fund, the details of administration and medical defense were taken care of by the secretary-treasurer.

When I assumed these duties, I discovered that the records of the Medical Defense Committee were somewhat scattered and not kept in a manner to be readily accessible to future officers. I, therefore, searched for all existing records, finding some of them in the office of Mr. Cavins, some in the office of Mr. Henderson, and some were stored in the warehouse from the executive secretary's office. Assembling these, I arranged them in chronological order, giving each one a serial number to be used in making reports so that the names of the doctors would not appear in the printed transactions. I have read over every letter and every report printed in THE JOURNAL and otherwise since the establishment of this feature in 1912, and made a tabulation of each case in a record book so that the data could easily be accessible. Each page contains the serial number, the doctor applying for defense, address, county membership, the original application blanks, the nature of the case, the date on which the services were rendered, and the date on which the member paid his dues for each year begining with 1911, a short history of the progress of the case and the settlement, if closed, an itemization of each check paid for that case and the name of the attorney and whether other insurance was carried. This means any officer in the Association can in a very short time review the history of the Medical Defense feature and know exactly the results and the expense incurred.

A criticism was received some time ago that this Association had defended doctors who were not members at the time services were rendered, and I have been interested in going over these records to find whether or not this has been so, and find it to be true in only one instance which was in 1914 when a delinquent member was defended at a cost of $30.00. This small sum represents the only amount that was ever expended for a member not deserving defense. The two specific cases alluded to in this criticism were, first, one member who was in good standing and was entitled to defense; second, a member who received no assistance from this Association, and therefore, no money was expended.

The report one year ago showed twenty-six cases pending, and the status of these cases on this date is as follows: Nos. 69, 72, 74, 76, 79, 80, 82, 84, 88, 89, 91 and 95 dismissed at no cost to the Association. No. 4 closed. Verdict for defendant. No expense. No. 62 compromised out of court. No expense. No. 71 dismissed. Cost $100.00. No. 73, verdict for plaintiff. Cost $250.00. Application for new trial. No. 75 compromised. No cost to Association. No. 81 dismissed. Cost $37.00. No. 87 dismissed. Cost $300.00. No. 90, verdict for defendant. Cost $240.00. No. 93, criminal case, not eligible for defense. Nos. 67, 83, 85 and 94 still pending, and No. 68 pending before the appellate court. New cases received from September 1, 1920, to September 1, 1921, eleven, Nos. 96 to 106, inclusive. Of these, three already have been closed: No. 97, verdict for defendant. Cost $500.00. No. 101 not defended, as member was delinquent at the time services were rendered. No. 104 compromised out of court. Four old cases have been reopened for new trial, making a total of seventeen cases now pending (namely, Nos. 67, 68, 73, 83, 85, 86, 90, 92, 94, 96, 98, 99, 100, 102, 103, 105, 106).

This is considerable reduction over the report of last year, and still the expense has been within the income allotted. We have had no attorney on salary, and all the money expended has gone to local attorneys employed by the members defended.

FINANCIAL REPORT

Medical Defense Fund.

Receipts:

Balance on hand at last published report.	
January 1, 1921, Cash	$1,526.21
Liberty Bonds	5,000.00
Nothing received from the General Fund on account of the amount on hand being over six thousand dollars.	
Total	$6,526.21

Disbursements:

Printing	$ 22.30	
Case No. 73	250.00	
Case No. 90	240.00	
Case No. 96	50.00	
Case No. 97	500.00	
Total		$1,062.30
Balance on hand Sept. 1, 1921, Cash	$ 463.91	
Liberty Bonds	5,000.00	

These bonds are Fourth Loan at 4¼% interest and do not mature until October 15, 1938. This presents a possibility of the Association losing money in case it had to sell these bonds to carry on the medical defense. However, the estimated income at 2,600 members is $1,950.00, and the interest on the bonds is $212.50, making the estimated receipts for next year $2,162.50. The maximum cost to the Association for any one year was in 1917 of $1,843.24, so that I do not think it will be necessary to sell the bonds before maturity. The cash on hand plus the interest which will be received in October will give us a suf ficient balance for this year.

The report of the treasurer is as follows:

Receipts:

Balance at last printed report, January 1, 1921	$ 7,028.40
Membership dues 2,571 members	10,280.00
(One in service, dues remitted)	
Total	$17.308.40

Expenditures:

THE JOURNAL, $2 per member	$5,142.00	
Secretary's stenographer (At $16.50 per week)	495.00	
Postage and incidentals	73.68	
Printing	255.25	
Councilors' expenses	29.41	
Legislative Committee	948.89	
Storage of furniture	38.50	
Total		$6,982.73
Balance on hand Sept. 1, 1921		$10,325.67

Respectfully submitted,

CHARLES N. COMBS, Treasurer.
E. M. SHANKLIN, Chairman,
GEORGE R. DANIELS,
FRANK B. WYNN.

REPORT OF THE COMMITTEE ON PUBLIC POLICY AND LEGISLATION

House of Delegates, Indiana State Medical Association:

Gentlemen: The activities of the Committee on Public Policy and Legislation are pretty well covered in an editorial in the April number of the JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION based upon data furnished by the Chairman of your Committee. At the last annual meeting of the Indiana State Medical Association the House of Delegates endorsed recommendations made by the Committee on Public Policy and Legislation, which recommendations were embodied in a bill introduced during the recent session of the Indiana Legislature and known as House Bill No. 267. The Bill, as presented, contains but two points of special interest, one the requirement of the annual registration, and a fee of $2.00 which is made necessary by the fact that our present law does not require annual registration and consequently no correct or up-to-date record can be kept of the physicians in the state of Indiana who have been licensed. Many have died, others have moved away, a large number are superannuated and no longer in practice, and without an annual registration, enforcement of the law is difficult and often impossible, and no current list of physicians in Indiana is obtainable. No such constructive work in legislation is possible without such a list as would be possible with it. The small sum of $2.00 for annual registration is a pittance compared with the large sum which the enemies of medical legislation annually contribute to secure the passage of state medical laws and to break down our present laws. It is a matter of congratulation that our Association has endorsed the principle of annual registration, and an annual fee for registration even though the amount is very small. Five other states now have annual registration in one form or another and it is urgently needed in Indiana. Unfortunately, owing to the illness of the chairman of your committee during the first half of the legislature, there were no active efforts made to promote House Bill No. 267 until the session was too far advanced to secure its passage. It passed the Lower House and was sent up to the Senate, and but for the rush of bills in the last few days of the legislature, it probably would have been passed and become a law. It was recommended that the same bill be introduced at the next session of the legislature, and the earnest cooperation of all members of the Indiana State Medical Association is solicited to secure its passage.

No just complaint can be made of the failure in the enforcement of the present law in the absence of an annual registration requirement and the fund raised thereby for the enforcement of the law. There is no merit in the argument that the state requires doctors to be licensed and therefore should furnish money out of the state treasury for enforcing the law. The state does require every man who practices medicine legitimately to be licensed and to have certain definite qualifications, and the state has done this because the medical profession asked it to, and our present law is a creature of our own conceptions and desires. It should receive our further support in a united effort to secure annual registration and the cordial payment of the small pittance annually suggested.

Second: The bill provided for the addition of the words "the healing art" in the definition of the practice of medicine to cover all forms of treatment where medicine is not administered.

It seems again necessary to call attention to the fact that all medical laws under our form of government are classified as police regulations and consequently their enforcement is left in the hands of the county authorities, and unless the different county societies will make continued and earnest efforts to secure the right kind of enforcement of the law, regardless of politics, and then give every possible aid to the prosecutor in securing evidence that will obtain conviction, the present law or any other law regulating the practice of medicine will become impotent. Police regulations require enforcement by local authority. If your automobile is stolen you do not appeal to the attorney general for help but to your local authorities. The principle and practice are the same in the enforcement of medical law.

Attention is called especially to the action of the Washington County Medical Society and to the resolutions adopted by it and published in the April, 1921, edition of the JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. These resolutions are addressed to the public and are of such importance and so pertinent to the present situation in Indiana that we take the liberty of embodying herein part of the resolutions and to recommend similar action to other societies:

"Since the day that Eve yielded to the blandishments of the devil, to the present time, men have been misled by alluring promises and brazen falsehoods, and have parted from their most precious possessions with little chance of ever recovering them.

"We feel it our duty to protect you from the follies and dangers of all fakers and confidence men who profess to deal in special and miraculous cures.

"To this end we feel that we should apply the surgeon's knife; and we hereby announce that since it is your privilege to employ whomsoever you please to relieve your distress when you are ill, we also reserve the privilege of waiting upon you only lusofar and for so long as you may accept our advice.

"And we wish to advise those who are believers in and boosters for chiropractics, that from and after this date we shall expect you to call upon the chiropractor for all your ailments, or for none; and that hereafter when the chiropractor has a case that is going to die we will refuse to assume any responsibility in the case, and that we will not sign the death certificate for the chiropractor as has been done in the past.

"We do not want your business and shall most certainly be too busy to look after you.

"MEMBERS WASHINGTON COUNTY
MEDICAL ASSOCIATION."

Special thanks are due to Representative Kingsbury, who was the sponsor for House Bill No. 267, and to Drs. DeLong, Phillips and Boner, who are members of the Lower House, and to Representative Harrison and to Senator VanOrman, and others, for the cordial support they gave to the efforts of your committee. Special attention is also called to the list of those who voted for the Bill, and very particular attention to those who voted against it, as shown by the list published in the JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION for April, 1921.

Respectfully submitted,

WM. N. WISHARD,
Chairman Committee on Public
Policy and Legislation.

REPORT OF COMMITTEE ON MEDICAL EDUCATION

House of Delegates, Indiana State Medical Association:

Gentlemen: In previous decades medical education as a problem has interested state medical societies very little, and whatever attention this subject may have aroused could have been associated with no sense of responsibility. Medical education in America was then a private function and concerned itself chiefly with the training of undergraduate students. Some physicians visited Europe, and more the medical centers of this country, and undertook what was popularly called "postgraduate work". Postgraduate work in the university sense, in America at least, this was not, since its grade was uniformly below the level of the undergraduate courses of the better medical schools. But designate these courses by whatever name you will, many such postgraduate schools deserve great credit for helping so many doctors to catch up, in some degree at least, with the medical advance made since they received their degrees.

With the general improvement in the average level of medical practice, and the specialization which of necessity has followed the rapid widening of the medical field, it has become common for two or more men interested in and trained in different aspects of practice to enter into some form of partnership, or, what is of more importance, for men well established in practice to associate with themselves recent graduates trained in the ever multiplying more scientific methods of diagnosis. Such associations cannot but stimulate the busy practitioner to continue his medical study. Of even greater importance is the rapid development of laboratory practice which makes its direct appeal to the public as well as to the profession. The result is that each practitioner of medicine feels more strongly than ever the necessity of keeping abreast of the times.

During the past forty years, and in part as a result of the development of preventive medicine, the growing consciousness on the part of the laity that they have a very personal interest in the quality of medical practice has resulted in definite legislation intended to improve the quality of available professional aid. State universities have had medical schools almost thrust upon them, and are now practically asked to see how good doctors they can graduate. With medical education a state function, with the power to license doctors also a state function, and with plenty of popular education, and more accurate each year, spread abroad, as to what are the marks of a good doctor, a state medical society cannot but organize itself with a view to obtaining for its members opportunities for education which are convenient and efficient. The opportunities for such postgraduate work have in the past not been many. The few could go to a distance, at great expense, but not so the many, and yet that state, the population of which virtually demands such study of its practitioners, should provide opportunity for not the exceptional but the average man. Postgraduate medical departments of universities, of which so much is heard today, will never be able to meet this problem since their advanced courses of from one to three years are more intended for the recent graduate who desires to pursue his education further before he begins his practice rather than to the man who in busy practice can afford but from three to six weeks each second or third year.

How then can such courses for practitioners be provided? Certainly the state universities should be as able as they are willing to carry the major part of this problem. Every physician in a given state should feel that he has the right to call on his state medical school for any assistance, information, or instruction he desires. Does he need materials for his laboratory? That should be obtainable from the university at cost price. Does he need advice or information concerning any test? That should be easy for him to get. Does he desire training in any department for one day, one week, one year? Then he should be able to get that, when he wants it, and at a reasonable price.

Good health of its citizens is one of the greatest assets a state can have; then good doctors are one of the state's greatest assets, and states should vie with each other in their efforts to have them. This means also that one of the first aims of a state medical society should be the continued education of its members whose medical study must continue as long as the practice. This means further that the state medical society and the state university should in

the future work out together many educational problems of mutual interest. True, no state university at present is doing its full part in such a program, but it is no rash prophecy that before long several will have made considerable progress in that direction. Why may not Indiana, always a pioneer, lead in the movement?

But what can be done today? This past summer at the Medical Department of our University thirty-five doctors attended for six weeks special courses in pathology, biochemistry, medicine and surgery. We could have cared for a much larger number in many more courses. Should groups of doctors desire special courses at other seasons than during the summer, these certainly could be arranged, granting that groups of sufficient size (of perhaps six) could be formed. A few doctors singly each year do join the senior class for a few weeks. The possibilities of such work have not yet been determined.

Several Indiana county medical societies have invited the University to send them traveling clinics—that is, groups of doctors who will conduct clinics at their county seats. Already this experiment is being made in New York State, and a somewhat similar plan has met with considerable success at Dayton, Ohio. In many ways this is, from the university's point of view, not as practical a scheme (except in the case of counties near the university) as are special courses at the medical school, for the reason that a university course in any one subject should, to have definite educational value, consist of at least eighteen hours (a minimum generally agreed upon). Briefer demonstrations than this could well form part of the program of the county and district medical societies, the educational possibilities of which are being developed less, if anything, rather than more than formerly. In this work the medical faculty would be glad to cooperate.

Each state university should have a medical library from which books could be sent on request to any doctor in the state. The very little use made of the Indiana Medical School Library by physicians has often aroused our wonder. In this connection we would invite the members of the State Medical Association to collect for this library all books published by Indiana men, and copies of old files of the various medical journals which have been published in this section of the country, for this library should have the most complete set of such journals there is in this country.

Respectfully submitted,

CHARLES P. EMERSON, Chairman.

REPORT OF COMMITTEE ON INDUSTRIAL AND CIVIC RELATIONS

House of Delegates, Indiana State Medical Association:

Gentlemen: No matter of sufficient importance to chronicle in an annual report has been referred to the Committee on Industrial and Civic Relations, nor have there been any questions arise which indicated that the Committee should assume the initiative for the Association. For this reason there has been no formal meeting of the Committee.

In the State of Indiana the matter of Compulsory Health Insurance and of State Medicine has not yet intruded itself with such vigor that the profession has been brought into direct combat with the issue, but that this issue will surely arise one cannot doubt. The Legislature of 1921 did not amend the State Industrial Act in any manner which modifies the relation of the medical profession to that act.

A recent decision of the Indiana Appellate Court in the case of The National Car Coupler Co. et al. vs. Sullivan is of interest as it withholds from the Industrial Board certain functions which the Board, prior to this decision, assumed. In this case Dr. Sullivan was employed by the National Car Coupler Co. to attend an injured employee. This service was rendered and a bill of several hundred dollars was submitted to the National Car Coupler Co. The bill the company refused to pay, and action before the Industrial Board was instituted by Dr. Sullivan. The Board, after hearing the evidence in the case, held that the bill was just and reasonable and ordered the Car Coupler Co. to pay. The National Car Coupler Co. declined to pay and appealed to the Appellate Court.

The Appellate Court decided that the Industrial Act of the State of Indiana "does not enlarge the authority of the Board with reference to the approval of fees beyond that provided in Section 25 in case of an emergency caused by the employer's failure to provide medical care, and the Board has no jurisdiction to pass upon the fees of a physician employed by employer".

With this decision the fee bill approved several years ago by the Industrial Board passed into desuetude, and the Board no longer decides upon fees other than those for services rendered by some physician in case of an emergency and not employed by the employer of the injured party.

Respectfully submitted,

NORMAN E. JONES, Chairman

REPORT OF COMMITTEE ON HEALTH PROBLEMS IN EDUCATION

House of Delegates, Indiana State Medical Association:

Gentlemen: Due to the death of Dr. W. D. Hoskins, the chairman of this Committee, no special report has been prepared except the following which was prepared for and presented before the Committee on Health Problems in Education at the Boston session of the A. M. A.

As chairman of a committee on Health Problems in Education, of the American Medical Association, representing the Indiana State Medical Association jointly with the State Teachers' Association, I beg to submit the following report on Health Problems in Education.

So many things affect the health of the school child that it is difficult to present a brief report.

The approval of plans for school buildings and certain equipment rests with the State Board of Health. The State Department of Public Instruction "is in hearty sympathy with every effort of every organization in Indiana devoted to the betterment of the health of school children and of all other people". They impress constantly on the minds of school officials that conditions in and about school buildings must be sanitary in every way. They cooperate with the State Board of Health along these lines.

During the last ten years, the tendency has been toward the consolidated type of school. Many fine new rural buildings equipped with modern conveniences have been erected within the last ten years. One can almost tell the date of erection by the type of building and equipment. Many of the recent ones have steam heat and flush toilets, either periodic automatic or individual. Gas engines are used to pump the water under pressure. Delco electric lighting is provided. Nearly all schools are provided with some domestic science equipment as Home Economics is a part of the curriculum. Pianos or Victrolas provide music for marching and physical education exercises. Playgrounds are usually ample for contest games and in many places playground equipment has been provided. There are rulings governing the type

of school conveyances. The motor driven cars are used where roads are good.

We have on the statute books of our state a law that permits the employing of school physicians, which is compulsory only during epidemics. Unfortunately, not many school officials take advantage of this statute, especially in the rural districts. We are hoping that this law may be made compulsory eventually, so that every child in the schools of this state may be under the observation of a competent physician, not only during times of epidemics but at all other times. During epidemics, local authorities are often aided by the State Board of Health Epidemiological Department, and Laboratory. An official is sent to any locality and assists with the inspection of children in locating carrier cases. Needed supplies are furnished and bacteriological examinations are made by the State Board of Health.

The State Department of Public Instruction is greatly in favor of detecting mental and physical defects in children and having these defects remedied if possible. A few of our schools are undertaking to conduct special classes for defective children. This work has not yet assumed very large proportions in Indiana, but we are hoping that it will develop and eventually meet fully the needs of our school system. In a few schools, research workers from colleges have conducted intelligence tests.

Indianapolis hospitals and town and county hospitals are doing capacity work for defective children. Institutions for feeble minded children have a long waiting list. The State Tuberculosis Sanatorium gives infected children special care and has provided the Fresh Air School in connection with the sanatorium. Similar attention is given by institutions of this nature at Fort Wayne, South Bend and Indianapolis. Fresh Air Schools are conducted in many localities and school lunches have been instituted to improve the condition of poorly nourished children. There is a widening conviction that where children are compelled to eat lunches in the schoolhouse, these lunches should be served in the most attractive way. There is also a movement in some cities for conducting special milk clinics where children undernourished may be given hot milk and perhaps some other food at special hours during the day in order to build up their constitutions. The nutrition work in Fayette and Huntington counties was begun eight years ago, and has attracted wide attention as other counties have fallen into line. The Department of Home Economics at our State University and State Agricultural College both through special agents and extension workers, have been responsible for the rapid development of this work in the last five years. Home Demonstration Agents, School Nurses, Parent-Teachers' Associations, Federated Club Health Committees, Sororities (notably the Tri-Kappas), Chambers of Commerce, Rotary and many other organizations have assisted. The type of lunch is adapted to the needs in the particular school undertaking this project. Additional interest has been aroused by the Home Demonstration Agents' cooperative work with the United States Department of Agriculture. Clubs of Women throughout counties have been formed and have been given instruction in food values and preparation. Girls' Clubs are taught methods of caring for various food products. The teaching of Home Economics has greatly aided this work, as the Home Economics Classes usually assist with the School Lunches.

The State Board of Education some months ago authorized the employment of school nurses as teachers of hygiene where the nurses are High School graduates, are registered, and are able to pass an examination in hygiene provided by the State Board of Education. Unfortunately some of the earlier graduates had not completed High School education and consequently were not eligible under this rule. It is not possible for the State Board to waive a high school training, since the regulation for employing nurses is based on the teachers' license law. Community and county nurses are employed by various agencies. Practically all nurses do more or less health work in the schools, except in the large towns where special school nurses are provided. Dentists are cooperating in this work as well as doctors, and are devoting much time to the correction of defects. One county has a nurse who is also school attendance officer, and executive of the Board of Children's Guardians. She not only inspects school children and refers them to school physicians, but when an ignorant parent refuses to have some needed correction made for a child, she has the child made a ward of the court and proceeds to give the needed assistance. She provides funds by having Child Welfare Associations sell tickets to moving picture shows, etc. All the children thus help the needy ones. Glasses have been fitted, tonsils and adenoids have been removed, post-infantile-paralysis cases cared for, poorly nourished children furnished with milk, etc. Deserting fathers are brought into court by her and compelled to contribute to the support of children. Mothers are given legal custody of their children and are paid for their care instead of having homes broken up. All these things are possible under Indiana laws, but often cooperative effort is lacking.

At least one thousand examinations of school children were made on request by the State Division of Child Hygiene, with the purpose of showing the need of the work in communities that were trying to establish health inspection in the schools. Great impetus has been given to local work owing to the fact that many child hygiene conferences have been held throughout the state, often in school buildings, and children from the schools have been referred for examination along with the examinations of the preschool child. It is the purpose of this Division to encourage each year the examination of all children who are to start to school for the first time, and the correction of defects so that the child may present a clean bill of health upon entering school. The community organization for Health Conferences held by the Child Hygiene Division will be effective for future work.

An aid to the maintenance of the health of the school child is found in physical education. The physical training law on our statute books applies only to cities of 5,000 or over in population, and does not provide sufficient funds for administration. For this reason it has not been declared effective. However, the physical training movement has been growing. Most of the cities in Indiana, and many consolidated school districts, are giving it special attention. In many counties, paid community workers are popularizing physical education and playground work. Equipment is provided usually by the township trustees but is often furnished in other ways. The trustee is also responsible for needed supplies for indigent families, including food, suitable clothes and books for school children, and in many places township funds are used to assist in the correction of defects found by the school inspectors.

Funds for a Riley Memorial Hospital for children were provided by the last legislature. This will fill a long felt need by providing a place where children may be kept under observation where diagnosis is difficult, and will relieve the congestion in our general hospitals.

Our State Universities and Colleges through their extension work are all contributing to the solving

of the health problems in our schools. The State Board of Health, the State Department of Education, the State Board of Charities, Industrial Commission, the Highway Commission, and other departments are contributing indirectly or directly to the same end.

Child Welfare Associations, Parent-Teachers' Associations, Children's Aid, Sororities, Farmers' Federations, Commercial Organizations, Rotary Clubs, and Fraternal Organizations are working on special phases of this problem. The sentiment they are creating will be invaluable in the securing of a well organized State Department for carrying on this work. In presenting this report, my chief regret is that it is impossible to give individual credit for many projects that are worthy of more extended notice.

Respectfully submitted, ADA E. SCHWEITZER.

REPORT OF THE COMMITTEE ON HOSPITAL STANDARDIZATION

House of Delegates, Indiana State Medical Association:

Gentlemen: There has been no systematic inspection of hospitals this year. It was not deemed necessary after the general state investigation in 1919 and 1920.

Your chairman has asked for information from the Committee on Education and Hospitals of the A. M. A. relative to changes in standing of any hospitals in the state, by reason of individual improvements, which would warrant better classification. No definite reply has been forthcoming, but we believe several hospitals in the state have been accorded advanced standing.

It is evident that some confusion exists upon this question, as some institutions have been rated differently by the Committee of the A. M. A. and that of the College of Surgeons. Your State Association Committee has communicated, officially, only with the National Organization.

Respectfully submitted,

ALBERT E. STERNE, Chairman.

REPORT OF COMMITTEE ON SCIENTIFIC WORK

House of Delegates, Indiana State Medical Association:

Gentlemen: The scientific program prepared for this session of the Association constitutes the report of your Committee on Scientific Work.

Respectfully submitted,

C. E. COTTINGHAM, Chairman.

REPORT OF COMMITTEE ON SCIENTIFIC EXHIBIT

House of Delegates, Indiana State Medical Association:

Gentlemen: The Indiana University School of Medicine has taken over the Scientific Exhibit for this session, and the display promises to be of unusual interest.

Respectfully submitted,

MILES F. PORTER, JR., Chairman.

REPORT OF THE COMMITTEE ON NECROLOGY

House of Delegates, Indiana State Medical Association:

Gentlemen: During the year ending Aug. 1, 1921, the state lost by death 100 physicians, a mortality rate of 22.4 percent, nearly 8 percent greater than the general mortality rate.

I herewith present a graphic chart showing the causes of death in the various decades.

Causes of Death	Various Ages 31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100	% of Total
Apoplexy and Paralysis		5	5	7	3			20%
Heart Disease			1	4	4			9%
Kidney Disease		1	3	1	3			8%
Arteriosclerosis			2	1	1	4		8%
Pneumonia	1	1	1		3			6%
Carcinoma		1		3				4%
Pulmonary Tuberc.		1	1	1				3%
Diabetes Mel.			1	1				2%
Typhoid Fever		1	1					2%
Accidental Injuries		1		1				2%
Suicide		1	1					2%
Appendicitis		1		1				2%
Encephalitis			1					1%
Gangrene		1						1%
Dysentery							1	1%
Septic Infection	1							1%
Acute Indigestion					1			1%
Unclassified		3	8	5	7	3	1	27%
TOTALS	2	17	25	25	22	7	2	100%

You may wonder at the percentum of the unclassified group, but I assure you that in each instance I wrote to the County Secretary, a relative or friend of the deceased, sometimes to all three, and received no reply. Early in the year I sent self addressed stamped envelopes when asking for this information, but the results were so unsatisfactory that after May 1st I sent my requests on a postcard.

If the County Secretaries could realize that this information is for the benefit of the Association as a whole, and not a personal favor to the Committee on Necrology, perhaps we could get better cooperation.

Respectfully submitted,

H. D. FAIR, Muncie.

REPORT OF COMMITTEE ON ARRANGEMENTS

House of Delegates, Indiana State Medical Association:

Gentlemen: The session will open with the annual smoker and get-together meeting at eight o'clock Wednesday evening in the Assembly Hall on the eighth floor of the Claypool Hotel. An interesting program has been provided, perhaps not too serious in nature, but of such character to make one forget his usual self and enjoy the lighter moments for an hour or so.

On Thursday noon the Indiana University School of Medicine will serve a luncheon at the University Building—West Michigan street—at 12:30. Transportation will be furnished to and from the luncheon. Complete information concerning this affair will be furnished by a representative of the School who will be in attendance during Wednesday afternoon and Thursday forenoon.

The outstanding event of the meeting is the annual dinner to be held Thursday evening at six o'clock in the Riley Room of the Claypool Hotel. Surgeon General of the Army, Merritt W. Ireland, will be the guest and speaker of the evening. His name alone assures a delightful and profitable evening, aside from all other features of the program.

A special committee, with Mrs. C. H. McCaskey as Chairman, has planned a program of entertainment for the visiting ladies during the entire session. Seats at the Circle Theatre will be provided, and an invitation is extended to all the ladies to a tea to be given at Dr. Ross' country place.

The medical profession of Indianapolis has arranged a series of clinics to be conducted by members of the Indianapolis Medical Society, and held on Wednesday afternoon, September 28, at the Robert W. Long Hospital, Indianapolis City Hospital, Methodist Hospital and St. Vincent's Hospital. Doctors desiring to attend these clinics should send their names to this Committee so that proper provision can be made for all.

The local medical society and the citizens of Indianapolis extend a cordial welcome to all visiting doctors and their wives and friends.

Respectfully submitted,

C. H. McCASKEY, Chairman.

ANTIVIVISECTIONISTS ATTEMPT SUPPRESSION OF TRUTH

Mr. Baynes' excellent article, "The Truth About Vivisection" in the July *Woman's Home Companion* has evidently proved a body blow to the professional antivivisection agitators. This article, which has already been commented on*, is written by one of the leading naturalists and animal lovers in the country. After long, painstaking, and impartial investigation he found, not only that there is no basis for the claims on which the antivivisectionists base their case, but also—and far more important, since it shows the mental and moral caliber of the agitators—that their literature is a tissue of misrepresentations and of garbled and obsolete authorities. Physicians have long known this. In the hearing on the Meyers Dog Bill (S. 1258) before the Senate Judiciary Committee, the advocates of the bill quoted, without any reservation, a statement of Dr. Henry J. Bigelow as the opinion of "one of the greatest surgeons in the United States". Yet Dr. Cannon showed that Bigelow was born over 100 years ago, that he made the statement quoted in 1871, that thirty years later he made another and entirely different statement endorsing animal experiments, that this fact was publicly called to the attention of the antivivisectionists at a Congressional hearing eleven years ago and that they were still using the original and misleading quotation. Mr. Baynes found many similar instances. One Dr. John Elliotson is quoted as a physician "of the highest intelligence". Mr. Baynes found that he was a mesmerist who was born 130 years ago. He also found that the whole case of the antivivisectionists is without any sound basis of fact. Mr. Baynes, as the author of the article, and Miss Gertrude B. Lane, editor of the *Woman's Home Companion*, are now naturally subject to all the invective and misrepresentation which the antivivisectionists can command. The following circular letter, sent out by the New York Antivivisection Society over the signature of Diana Belais, shows the fair-mindedness and sweet reasonableness characteristic of this organization:

To All Friends of Animals:—One of the most reprehensible and misleading attacks upon our literature has its place in the July *Woman's Home Companion*, written by one Ernest Harold Baynes, who claims to be a humanitarian, going about the country lecturing to Humane Societies against cruelty to animals, yet at the last moment of his address delivering a strong defense of the most cruel practice in the world—vivisection. (I have been informed that he has done this without warning to the Society employing him.)

Permission has been asked by me to answer his glaring misrepresentations, but appearances indicate there is a general scheme afoot to spread vivisectional teachings broadcast through those magazines appealing especially to women.

In the meantime, please write to the *Woman's Home Companion*, 381 Fourth Avenue, New York City, excoriating this nonsensical article—full of perversions—that defends vivisection, and I sincerely hope you may follow my example by telling the editors that not only have you bought your last number, but that you will enter upon a personal campaign to urge others to withdraw all support in future.

I do not ask this of you on solely sentimental grounds, but because we must unmistakably show those who boldly and flagrantly misrepresent our literature that our united strength is something to be reckoned with.

Act at once!

Do not forget that vivisectors have admitted that our "Medical Opinion" booklet has done them a lot of harm—hence these repeated attempts to undermine it and our other work built up with so much care.

Faithfully yours,

DIANA BELAIS, President.

Comment is unnecessary. It is also superfluous in view of the admirable editorial of the Boston *Herald* for Aug. 25, 1921, which says:

The New York Anti-Vivisection Society is making a serious mistake in trying to boycott the *Woman's Home Companion* because it recently printed an article by Ernest Harold Baynes, the well known nature lover and humanitarian, on the "Truth About Vivisection." Are the antis unwilling that people should hear the other side? Apparently their president has sent a letter to the faithful in which he asks them all to write to the magazine, excoriating the article, and he further expresses his hope that they will follow his example by telling the editor that they have bought their last copy of it, and they will enter into a personal campaign to urge others to withdraw all support in future. It is not by suppression of intelligent discussion that any cause really derives aid. If the cause of the antis, in this instance, is so bad that they dread the presentation of the other side, it must be even weaker than we supposed.

The attempted boycott of the antivivisection agitators against Mr. Baynes, Miss Lane, and the *Woman's Home Companion* will naturally have little effect that was not anticipated. Every fair-minded person must recognize the value of such an unbiased summary of the problem as Mr. Baynes has presented. A public service of great value has been rendered by the author of the article, the editor and the periodical which have had the courage to publish the facts in the face of such an unprincipled opposition as was realized would be encountered.—*Jour. A. M. A.*, Sept. 3, 1921.

*J. A. M. A., Aug. 6, 1921, p. 469.

THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION
Devoted to the Interests of the Medical Profession of Indiana

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SEPTEMBER 15, 1921

EDITORIALS.

OUR PRESIDENT

David Ross, President of the Indiana State Medical Association, 1920-21, was born in Indianapolis, Indiana, November 20, 1865. His early life was spent on the farm and in teaching school. He received his B.S. degree from the Central Normal College, Danville, Indiana, in 1891, shortly thereafter taking up the study of medicine at the Medical College of Indiana, from which he graduated in 1895. During the years of 1905 and 1906 he served as interne at the Indianapolis City Hospital, and since that time has practiced medicine continuously in the city of Indianapolis.

On September 24, 1901, Dr. Ross was married to Miss Gertrude Goodhart, of Indianapolis. They have one son, Andrew Franklin Ross, now 15 years of age.

Since his graduation in 1895, Dr. Ross has been instructor in the Medical College of Indiana and its successor, the Indiana University School of Medicine, in which institution he now holds the chair of Associate Professor of Surgery. He served as president of the Indianapolis Medical Society in the year 1915, and for many years has been active in medical society work, not only in his local society but in the state and national organizations.

The Indiana State Medical Association has not only honored Dr. Ross in electing him to the highest office it has to offer, but has brought honor to itself in so doing.

EARLY ARTERIAL DISEASE

The difficulty of early detection of arterial disease is generally recognized by internists as the chief obstacle to practical success in the management of such cases. Early diagnosis, except by supposition, is almost impossible by the methods available to the average clinician. Study of the retinal vessels by the ophthalmoscope requires considerable technical skill and wide experience and is therefore largely limited to trained ophthalmologists.

In a paper read before the Association of American Physicians in May, Harlow Brooks called attention to the fact that the conjunctival vessels show changes consonant with those present in the retina and describes a method for their study originated by David Dennis. The assumption that the conjunctival vessels show changes similar to those in the retinal vessels is borne out by the fact that they spring from the same arterial trunk.

The only instruments required are the pocket flashlight and the ophthalmologist's loupe. The patient is directed to turn his eyes to one side, the light held at a distance of three or four cm. and directed obliquely onto the conjunctiva and the lens held at the proper focal distance with the eye of the observer brought close to the lens. Dr. Brooks goes on to say: "One is thus able to study in a most satisfactory way the larger branches of the ciliaries and palpebrals, the tiny arborizing arterioles and even the capillary circulation in the ocular conjunctivæ as well as the return circulation in the venules and the larger ciliary palpebral branches of the opthalmic."

The evidences of arterial disease as shown by this method of examination are similar to those seen by ophthalmoscopic examination of the retinal vessels, namely elevation and tortuosity of the superficial vessels and occasionally nodes of lumen contraction. Attention is called to the great advantage incident to this method of being able to study the effects of the arterial disease upon adjacent tissue.

The simplicity of the method with the minimal degree of technical skill required make it a valuable aid in clinical work.

By the time the patient's history of subjective symptoms and ordinary routine physical examination make the diagnosis of early arterial disease more than a reasonable probability, ineradicable damage has been wrought and little more than a retardation of the process can be accomplished. Study of the conjunctival vessels would seem to offer the hope of a greater degree of accuracy in the early detection of arterial disease and consequently the hope of more satisfactory practical results in its management.

MEDIOCRE MEDICAL PAPERS

On numerous occasions we have received complaints from prominent members of the Association concerning the poor quality of many of the papers presented at our annual sessions and afterward printed in THE JOURNAL. Quite recently a very vigorous criticism concerning the mediocre character of several papers presented at the South Bend session has been received, and while the letter was a personal communication we asked that it be published in THE JOURNAL, after such editing as seemed indicated in order to eliminate personalities, but without securing consent of the writer.

We believe that these criticisms are, in a measure, amply justified. There really is no good excuse for the presentation of a purely text book

paper, or a paper that is so devoid of character or merit as to justify its consignment to the wastebasket. When a member of our Association presents a paper that has been copied, paragraphing, punctuation and all, from a late textbook on surgery, and expects the readers of that paper to give him credit for originality, it is time to call a halt. We recognize the fact that there are many medical and surgical subjects to which little can be added to what is already known and published in current textbooks and medical periodicals, but if any member insists upon discussing a threadbare subject, then let him review the literature and draw some conclusions from the opinions of various authors that will be of some value to readers. Probably the vast majority of papers read before our medical societies will be of that character, if they are worthy of presentation, but such papers are a real help and bring out discussion, to say nothing of proving an educational factor for the less experienced.

Plagiarism is common among medical writers, and indicates not only ignorance on the part of the one who is thieving from literature, but also a laziness that is inexcusable. For the man who has something original in the way of a theory as to the causation of disease or the method of treatment, we have the highest respect and accord the greatest praise. We have little use for the man who tries to get into the limelight by appropriating the work of others. The editor of THE JOURNAL has been criticized by some writers whose productions have not been accepted for publication, though in most instances when the writer was accused of plagiarism or lack of merit in the paper, and the charge sustained, there has been no further effort to force publication of the manuscript submitted. In the case of papers presented before the annual session, the editor has not felt justified in usurping the functions of the Program Committee, or in asking that the Publication Committee of the Council take action in ordering a poor paper pigeon-holed. However, the character of the papers presented at our annual sessions can be improved upon if the program committees will scan, in a critical manner, the contributions that are offered, and perhaps investigate to some extent the ability of those who are putting forth their maiden efforts.

Another subject that is interesting to the editor and should be of interest to all essayists is the matter of editing manuscripts. There is no excuse in this day and age for furnishing any copy that is not typewritten. There also is no excuse for offering for publication any manuscript that has not been carefully edited as to grammatical construction, paragraphing, spelling, capitalization and punctuation. One of the besetting sins of the average doctor who writes a paper is that he utterly fails to appreciate how his badly constructed sentences may be interpreted, or how the thread of his discussion is lost through attention directed to verbiage. Another error of less importance is bad spelling, and in capitalizing the names of diseases, which latter is not permissible except in those few instances where the disease is named after the discoverer. Quotation marks should be used when authors are quoted, and due credit should be given to the opinions of others when appropriated. Abbreviations should be avoided as much as possible, as they are apt to be ambiguous or to be misinterpreted. Accuracy is not only desirable but a necessity if the author desires to avoid ambiguity or possibility of error. In short, a carefully prepared manuscript is not only a joy to the editor who has to prepare it for publication, but it bespeaks for the writer a reputation for intelligence, thoroughness and orderliness which should be the aspiration of every medical man.

So far as the kind of papers is concerned, a good rule to follow is that of one of the prominent sections of the A. M. A. which demands of its essayists papers which comply with the following: "First, such as may contain and establish positively new facts, modes of practice or principles of real value. Second, such as may contain the results of well devised original experimental researches. Third, such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance."

Program committees, if they innocently accept an undeserving paper for presentation before any session of our Association, should, after they learn of the unworthiness of the paper, refuse to sanction its publication in THE JOURNAL. Furthermore, no paper presented at any session of the Association should be approved for publication in THE JOURNAL unless it possesses merit and actually has been read or defended by its author.

NATIONAL CANCER WEEK

Under the auspices of the American Society for the Control of Cancer there will be conducted from October 30th to November 5th, inclusive, a nation-wide campaign against cancer. The campaign has been designated "Cancer Week". The chief aim of the campaign is the dissemination of such facts concerning cancer as are known with the end in view of reducing the mortality from this dread disease. There is no preventive medicine campaign of more importance to all the people and none giving promise of more interest and hope. The death rate from cancer (over 90,000 per year in this country) increased until 1916, since which

time it has remained stationary. This society was organized in 1913. If in three years the increase in the death rate from cancer has been halted may we not in reason hope soon to cause it to fall? It is conceded by those who have studied the subject most carefully that with our present knowledge the death rate can be cut in half. This would mean a saving of 50,000 lives annually. It is confidently hoped that every health agency in the country may use every endeavor to make "Cancer Week" yield the harvest of health and happiness which it can be made to yield if every man does his duty. The Hoosier State occupies an enviable position in the procession of progress and it is hoped and believed that she will hold her position in "Cancer Week". The burden of the campaign will rest largely of course on the shoulders of the medical profession, and THE JOURNAL is especially anxious that every medical and allied organization in Indiana do its "bit".

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

THE TIME—Wednesday, Thursday and Friday, September 28, 29 and 30, 1921.

THE PLACE—Indianapolis, Indiana.

THE EVENT—The annual session of the Indiana State Medical Association.

IN consideration of the fact that Surgeon-General Ireland is an Indiana man, he will receive a very hearty welcome as the guest of the Indiana State Medical Association at the Indianapolis session.

WE regret that an over-abundance of material for the September number of THE JOURNAL necessitated omitting Dr. Wynn's article from this number. However, the series will be resumed in the October issue.

FROM the number of letters we have received concerning our editorial on Christian Science in the August number of THE JOURNAL it is evident that our readers appreciate our efforts to deal with Christian Science in a somewhat analytical manner, and discuss its various fallacies and inconsistencies.

As mentioned in the August number of THE JOURNAL, Indianapolis will be crowded with Grand Army veterans during the first days of the session of the Indiana State Medical Association. Therefore, those doctors who intend to attend the Indianapolis session of the Association will be wise if they secure their hotel accommodations in advance.

"PROTEOGENS", manufactured and sold by the William S. Merrell Company, again are being offered to Indiana physicians with extravagant claims as to virtue. We desire to call the attention of our readers to our comments in earlier numbers of THE JOURNAL, as well as to the report of the Council on Pharmacy and Chemistry of the A. M. A., concerning the value of "Proteogen" preparations. In short those doctors who base their work on rational findings will steer clear of "Proteogens".

INDIANA boasts of good roads and in consequence a large number of doctors will find it convenient and pleasant to go by automobile to Indianapolis to attend the annual session of the Association. The last time we met in Indianapolis a number of doctors lost their automobiles in a garage fire. This leads us to suggest that it is a sensible idea to carry automobile fire and theft insurance, but not to miss the Indianapolis session through fear of automobile loss by fire.

AS usual we have had some difficulty in getting the copy for this number of THE JOURNAL. Many members are away on vacations, and most of them dislike to go to the trouble of preparing papers or making out reports. However, as a result of the usual pressure and keeping everlastingly at it, we are able to present the completed announcements for the Indianapolis session. We hope that the program will invite attendance and that each one of the papers will merit extended discussion.

IN a recently issued book on "Optimistic Medicine" attention is called to the unlimited and undeserved financial credit extended to patrons by the conscientious and qualified medical men, and a rather interesting picture is painted of the doctor who carries a family through all sorts of serious and dangerous illnesses only to see that same family take the simple ailments to the advertising doctor across the street who emphatically states "cash in advance". True, and the average doctor of respectable standing

will continue to extend credit, not a favor to the debtor, and keep on complaining because he does not succeed financially.

THE report of the chairman of the Committee on Education, published in this number of THE JOURNAL, not only points out the necessity for providing postgraduate teaching in Indiana but really shows what the University is willing to do. There is no reason why the large number of our Indiana doctors cannot secure postgraduate work in Indianapolis where there is an abundance of material, and where, as Dean Emerson says, the faculty of the University is ever ready to give instruction. The suggestion that the Indiana State Medical Association combine with the University authorities in arranging for courses of postgraduate instruction is worthy of serious consideration.

"THE CITIZENS MEDICAL REFERENCE BUREAU" is the pretentious title of an organization in New York which proclaims on letterheads its "opposition to compulsory medicine". In all probability this organization gets its chief impetus and support from the anti-vaccinationists and the anti-vivisectionists, and probably secures not a little encouragement from various pseudo-medical cults. Like all other enterprises which are fighting the work of the regular medical profession, the propaganda abounds in misrepresentation and falsehoods. However, the organization subscribes to some good medical journals, our own included, and the promoters ought to learn a few facts that may be of some benefit to them if their vein of honesty is not too badly contaminated.

THE success of the quacks and irregulars depends upon advertising, but even advertising would not have helped them if the regular medical profession had not failed to acquaint the public with the truth concerning scientific medicine. In reality we have been too ethical, in the sense that we have not taken the public into our confidence but have reasoned that the public ought to have sense enough to know that education, experience and training counts for more than ignorance, inexperience and no training. The public press is a moulder of public opinion, and if the regular medical profession had taken advantage of the public press in making the public acquainted with the accomplishments of scientific medicine, the public would not today be suffering from the effects of so much quackery and charlatanism.

AT last we have a cure for what most of us common mortals in the medical profession have considered incurable. So goes the promise of the chiropractors. In advertisements the announcement is made "Why Be Blind? Chiropractic Cures Blindness and Deafness." In keeping with this announcement we have been informed that a chiropractor, formerly a rather indifferent janitor but blossoming out into a doctor of chiropractic after a few weeks of college (?) training, is treating a deaf mute with a promise of restoration of hearing, and a case of senile cataract with a promise of restoration of sight. What a pity that so many of us didn't start in shoveling coal and afterward study a few weeks at the fountain head of chiropractic! How ignorant we are and how worthless is our University degree, and what a waste of time in spending four years at a medical college!

EVERETT SANDERS, United States representative from the Fifth district, of Indianapolis, has written to Dr. E. L. Larkins, of Terre Haute, Indiana, that he is in favor of the Sheperd-Towner bill and thinks that most of the objection to the bill has arisen out of a misapprehension of terms. Representative Sanders is mistaken in his conclusions. The principal objection to the bill is that it is a step in the direction of socialism, which bids fair to cause an endless amount of trouble. The scheme is a paternalistic one which is objectionable because it not only has a tendency to trample upon the rights and independence of mothers, but adds another link to those measures which aid in pauperizing a community. The fact that the bill places the matter in the hands of the Department of Labor is in itself sufficient to kill it. If any such measure is to be foisted upon the country it ought to be under the control of the Department of Health, and the latter department is not asking for any such legislation.

IT seems a pity that Purdue University should lose its gifted president through a foolhardy attempt to do what others have not done in the way of dangerous mountain climbing. A certain number of our people seem to have a mania for doing dare-devil stunts and take particular delight in accomplishing results at the risk of their lives. Inasmuch as the average man in the rational pursuit of business or pleasure risks his life many times during the course of a year, it seems almost idiotic to take the unnecessary risks, with such great odds against them, as is included in the many hair-raising stunts that we read about every day and of which mountain climbing may be considered a close second. President Stone may have taken special delight in the risks that he regularly ran in attempts to climb précipitous mountains as a mere pastime, but he finally sacrificed his life, just as most adventurous people of that sort usually sacrifice their lives, and a great university has

lost a great man as a direct result of a morbid desire for thrilling adventure. Mountain climbing is a good deal like ballooning—the game isn't worth the candle.

THE lawyers are asking that the legislature provide stringent requirements for the practice of law. This is eminently fair, and there is no reason why the request should not be granted. It has been said that anyone either with or without a good moral character could be admitted to the bar in Indiana. This has not helped to improve the status of the legal profession, and has worked a great injustice to the public from the fact that many scalawags are branded as lawyers. It would be well if all lawyers were required to have at least two years' college or university training, supplemented by a law course of at least two years, before being admitted to the bar. The members of the medical profession sympathize most heartily with the lawyers in their efforts to improve their standards. Likewise the lawyers can appreciate the position we are in in demanding a high standard for the practice of medicine. It certainly is about as humiliating to a lawyer to have to extend the right hand of fellowship to an ignorant and thoroughly unqualified member of his profession as it is for a doctor to extend the right hand of fellowship to an arrant quack, even though the quack is licensed to practice medicine.

FROM a circular of information issued September 1, 1921, we quote the following: "The National Board of Medical Examiners was organized in 1915, by Dr. W. L. Rodman, then President of the American Medical Association. It began operation in 1916 with the purpose of establishing in this country a standard qualifying examination which could be safely accepted by all State Boards of Medical Licensure as an adequate qualification for the practice of medicine.

"During the past five years the Board has made such progress that it is now quite generally recognized, not only throughout this country but also in Europe. At the present time its certificate is accepted by the United States Army, Navy, and Public Health Services as a qualification for admission to the Medical Corps of each of these services; the State Boards of Medical Examiners of twenty states are accepting its findings in lieu of their own examinations, and the Conjoint Examining Board of England, as well as the Triple Qualification Board of Scotland, admit licentiates of the National Board to their final or clinical examinations. In eleven other states the Board's certificate will be accepted as soon as certain legal technicalities can be removed.

"The certificate will admit to the final examination (Part III) of the Conjoint Examining Board of England (Royal College of Physicians of London and the Royal College of Surgeons of England) and the Triple Qualification Board of Scotland. It also admits to the American College of Surgeons and the Mayo Foundation (Graduate School of the University of Minnesota)."

In this list Indiana is not represented. This certainly does not bespeak carefulness on the part of our State Board, but rather negligence, as there is no reason why Indiana should be lagging behind in the recognition of such a very worthy enterprise.

As will be noted in the report of the Committee on Industrial and Civic Relations, the courts have decided that a company or corporation employing a physician or surgeon to attend a sick or injured employee is not under obligation to pay the bill incurred, and furthermore, the Industrial Commission has no right to fix fees or determine who shall pay the fees charged by the attending physician or surgeon. This virtually puts the doctor in the position of having no standing in court and being obliged to take a chance upon securing remuneration for any services that are rendered a company or corporation. In fact it does not seem to place responsibility upon anyone, and even the corporation or company employing a doctor need not pay for the services if they desire to get out of doing so. In other words, there is no such thing as a contract, implied or otherwise, so far as a doctor's rights are concerned, and, likewise, there does not seem to be any moral obligation to live up to an agreement. Just why a doctor should be excluded from the privileges of securing justice is rather difficult to explain, though probably it is due to our well-known habit of accepting impositions as well as being "easy marks" in general in accordance with our reputation. However, there is an old saying that "you can lead a horse to water but you can't make him drink," so doctors can retaliate by making sure that they are to be treated with justice and fairness before they undertake to render valuable services.

THE frequent reports of deaths from asphyxiation in silos call attention to a menace to human life of which the public seems not to be aware. A silo is essentially a tubular tank of considerable height, designed to contain green fodder, generally corn. The silo is usually provided with doors at intervals along the sides to provide ventilation and to facilitate the removal of the ensilage during the feeding season.

As the silo is filled, these doors are closed. The immature corn is cut into small pieces by a cutting machine, and the chopped material is blown into the silo by a "blower" attached to the cutter. As soon as it is placed in the silo, the ensilage begins to undergo changes in a direction opposite to normal plant metabolism by which the oxygen content of the surrounding air is considerably decreased and the carbon dioxide content is largely increased. In some cases, nearly all of the oxygen is consumed. The carbon dioxide surrounding the particles of silage is supposed to be the principal preserving agent for the green fodder. If the doors immediately above the level of the silage are not kept open during the process of filling the silo, so as to allow for free ventilation, carbon dioxide is likely to collect in sufficient amounts during the night to endanger the lives of the workmen who enter the silo in the morning. Owing to the high density of carbon dioxide, it tends to collect at the surface of the silage so that workmen who sit or lie on the silage before the filling operation begins are much more likely to suffer than those who stand. Owing to the lack of information concerning the possible danger in filling silos, country physicians, whenever practicable, may well warn farmer patients who own silos relative to the danger mentioned.—*Journal American Medical Association,* August 27, 1921.

THE chiropractors are good advertisers. They know the value of publicity and are sensible in taking advantage of it. The osteopaths are either feeling the effects of chiropractic inroads, or else are profiting by the example of the chiropractors, for they too are beginning to advertise, and our newspapers are beginning to blossom out with articles on "What Osteopathy Can Do for You". We confess that we admire the real business acumen of all of the pseudo-medical cults that take advantage of the psychology of salesmanship by persistent advertising in the daily newspapers. If the people never hear anything but one side of a story, then that side is bound to be accepted by a large portion of the public. It doesn't make any difference whether the tale of the pseudo-medical cults bears the imprint of truth or not, it gains credence through lack of opposition or contradiction. The trouble with the regular medical profession has been that it is too content in believing that the old adage, "Truth is mighty and will prevail," should be permitted to place scientific medicine on the high plane where it belongs. However, had the regular medical profession been wise and done justice to itself as well as to the public at large, it would have taken the trouble to acquaint the public with the aims and accomplishments of scientific medicine, and under a program of publicity that could have been rational as well as ethical there would have been no room for the development of the pseudo-medical cults that are founded upon the deification of ignorance and live by exploiting the public. In fact, advertising is the one thing that places quackery and pseudo-medical practice in the foreground and keeps it alive. Without advertising it would die. Therefore, chiropractic, osteopathy, napropathy and all of the other horde of cults that claim some peculiar method of curing or alleviating diseases must patronize the public press if they desire to live. However, we cannot help wondering why the regular medical profession has denied the public the value of information that would make it impossible for quackery to thrive as it does at present.

DEATHS

ARTHUR WHITE, M.D., of Rockport, Indiana, died August 11 at the age of 89 years. He was a graduate of the University of Maryland School of Medicine.

JOHN HAIG, M.D., of Bloomfield, Indiana, died in July at the age of 56 years. Dr. Haig was a graduate of the Miami Medical College of Cincinnati.

JOHN W. PUGH, M.D., died July 26, 1921, at Gas City, his home, at the age of 77 years. Dr. Pugh was a graduate of the Curtis Physio-Medical Institute, of Marion.

JESSE L. HILL, M.D., died at his home in Lowell on August 3 as a result of injuries received from a fall. He was a graduate of the Rush Medical College of Chicago.

JOHN W. BILBO, M.D., of Russelville, Indiana, died July 24 from paralysis and chronic nephritis, at the age of 69 years. He was a graduate of the University of Louisville, Medical Department.

FREDERICK M. AITKEN, M.D., of Bristol, Indiana, died August 22, 1921, at the age of 75 years. Dr. Aitken was a graduate of the Columbia University College of Physicians and Surgeons, New York.

W. H. COOK, M.D., of Fredericksburg, Indiana, died at Livonia, Friday, July 29, after several weeks' illness. Dr. Cook was a graduate of the Kentucky School of Medicine, Louisville, and was a member of the Washington County Medical Society.

WILLIAM EDGAR DOWNIE, M.D., Indianapolis, Indiana, died July 22, at the age of 35 years, following a nervous breakdown. Dr. Downie was a member of the Wyoming State Medical Society and the American Medical Association. He was a graduate of the University of Louisville.

CHARLES A. WHITE, M.D., of Danville, Indiana, died at the Deaconess Hospital at Indianapolis at the age of seventy-six years. Dr. White was a graduate of the Rush Medical College of Chicago and was a member of the Indiana State Medical Association and the American Medical Association.

GEORGE ROWLAND, M.D., of Covington, Indiana, died August 10, 1921, at the age of 81 years. Dr. Rowland was a graduate of the University of Michigan Medical School, Ann Arbor, and was a member of the Fountain County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. GEORGE R. DANIELS has been made republican nominee for mayor in the city of Marion.

THE Lawrence County Medical Society held its monthly meeting at Bedford, Indiana, on August 3, 1921.

DR. C. A. SELLERS, of Hartford City, was operated upon August 5 at the St. Joseph's Hospital, Fort Wayne.

THE annual picnic of the Clinton County Medical Society was held August 4 at the country home of Dr. Sims.

DR. H. C. DAVISSON, of Hartford City, who has practiced medicine in that city for the past sixty years, has retired.

DR. JOHN H. STORK, of Petersburg, suffered a slight stroke of apoplexy on August 2, but has practically recovered.

DR. WILLIAM N. WISHARD, Indianapolis, spent his vacation in Glacier National Park, where he enjoyed mountain climbing.

DR. E. S. WAYMIRE, of Denver, has resigned his office as County Coroner. Dr. E. A. Carlson has been appointed to fill the vacancy.

DR. NATHANIEL CORN, of Pikeville, Indiana, was severely injured July 30 when he suffered a kick in the face from his horse.

THE members of the Lake County Medical Society with their families held their annual picnic at Whiting Park on August 12, 1921.

DR. F. M. PRAY and wife, of Muncie, left July 24 for Philadelphia, where Dr. Pray will take some special work in eye, ear, nose and throat diseases.

DR. FERNANDE J. I. HATCHAT, for the past few years physician for the girl students at Indiana University, was married to Thomas S. Luck, on August 10.

DR. CARLTON DANIELS and wife have removed from Corydon to Indianapolis, where Dr. Daniels will take up the special practice of eye, ear, nose and throat.

DR. JAMES V. NELSON has been elected house physician of the Rehabilitation Home for World War Veterans at Marion and will take up his residence in that city.

THE graduating exercises of the Training School for Nurses of the Fletcher Sanatorium, Indianapolis, were held on August 18. Six nurses received diplomas.

DR. HIDEYO NOGUCHI, of the Rockefeller Institute, has introduced a serum which is intended, by establishing an immunity, to reduce the mortality from yellow fever.

DR. JOHN H. TALBOTT, 2043 North Delaware street, Indianapolis, who has served for the past thirty-two years as a medical examiner for the Pennsylvania railroad, has retired.

DR. JOSEPH CLAYPOOL, of Mellott, Indiana, suffered a stroke of apoplexy on Monday evening, August 8, while in his office. He is reported as being in a serious condition.

DR. ALFRED HENRY, of Indianapolis, was named consultant on medical field service and clinical tuberculosis by the National Tuberculosis Association in its list of specialized consultants.

DR. MARION WYGANT, who has been practicing for the last year at the City Hospital in Indianapolis, has located at 511½ North Main street, Mishawaka, Indiana, for the practice of medicine.

DR. JAMES STANTON, of Logansport, has been selected by the United States government to special duty as a member of the "flying squadron" which is to care for the claims made by ex-service men upon the government.

THE doctors and their families, nurses, assistants and technicians of the Clinic of Garrett were entertained at an outing at Wawasee Lake by Dr. C. E. Howard and family. Dr. Howard is a member of this clinic.

A FRESH warning has been issued by Surgeon General Cumming, of the United States Public Health Service, against the use of horse-hair shaving brushes for the reason that many cases of anthrax have been traced to their use.

DURING August the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Beebe Laboratories, Inc:. Beebe Protein Milk, Beebe Modified Buttermilk.

A HOSPITAL program for war veterans has been announced by Col. Charles R. Forbes, director of the Veterans' Bureau, involving the expenditure of $6,110,000. Additional buildings are to be erected and improvements made at various places.

THE Gibson County Medical Society held a meeting at the home of Dr. S. I. Arthur, of Patoka, Friday, July 29, the general subject of discussion being public health and sanitation. Papers were read by Dr. S. I. Arthur and Dr. R. A. Cushman.

DR. C. C. RAYL, of Decatur, will remove from his rooms in the Allison block to a new office in the Pumphrey building, which is just being completed. Dr. Rayl's new suite will consist of a reception room, private office, x-ray and laboratory rooms.

DR. S. P. HOFFMAN, who has been taking postgraduate work in the East, has returned to private practice and has opened offices in the Medical Arts Building, Fort Wayne. Dr. Hoffman was formerly associate medical director of the Lincoln Life Insurance Co.

DR. G. W. H. KEMPER has returned to California after spending several weeks in Indiana adjusting business matters. He reports that his general health is greatly improved as a result of the California climate. He is located at 1239 East Orange Grove avenue, Pasadena, California.

SIX thousand five hundred and nine suicides were reported to the Save-a-Life League in the first six months of the year 1921, 4,527 of whom were males and 1,982 females. During the first six months of 1920 2,771 suicides were reported in the United States, 1,810 of whom were males and 961 females.

DR. H. R. O'BRIEN, of the United States Public Health Service, Washington, has arrived in Indianapolis, where he will collect statistics concerning the life and health of miners and quarrymen in Indiana. Dr. O'Brien will be assisted in his work by Dr. J. N. Hurty, Secretary of the State Board of Health.

THE United States Civil Service Commission announces open competitive examination for Associate in Clinical Psychiatrics and Psychotherapy. Application for this examination will be received by the Commission at Washington, D. C., until the hour of closing business on December 1, 1921. Applicants should apply at once for Form 2118, stating the title of examination desired.

THE United States Civil Service Commission announces open competitive examinations for the positions of Roentgenologist, Associate Roentgenologist, Assistant Roentgenologist and Junior Roentgenologist. Applications will be rated as received until December 1, 1921. Applicants should at once apply for Form 1312, stating the title of the position desired, to the Civil Service Commission, Washington, D. C.

DR. FRANK B. WYNN, of Indianapolis, is heading a mountain climbing party in Glacier National Park, Montana, which will attempt to climb Mt. Saint Nicholas, one of the steepest mountains in the world and one that, as far as records show, has never been climbed. Dr. William N. Wishard, of Indianapolis; Dr. H. H. Goddard, of Columbus, and Dr. Silas Neitert, of St. Louis, are some of the members of the party.

ONE of the main features of the Cincinnati exposition to be held in Music Hall, Cincinnati, October 15 to 22, is Rural Sanitation Day. Dr. C. L. Lumsden, of the United States Public Health Service, will be one of the principal speakers and a program of special interest to farmers and their families has been prepared that will show in a comprehensive and simple manner the way the farmer can best safeguard his health and that of his family.

At the ninth annual session of the Mississippi Valley Conference on Tuberculosis, Illinois, Indiana, Iowa, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin and Ohio will report at Columbus, September 12-14. Addresses will be given by Dr. Allen K. Krause, Baltimore, director of the Dow's Foundation for Tuberculosis Research; Dr. H. Emerson, New York, and Dr. James A. Miller, New York, president of the National Tuberculosis Association.

ATTENTION of the members attending the Indianapolis session is invited to the following list of commercial exhibitors who will be at the Claypool Hotel: Room 846, Max Wocher & Son Company; Room 844, W. D. Allison & Company and Radium Chemical Company; Room 842, Swan-Myers Company; Room 840, Medical Protective Company and W. H. Armstrong Company; Room 838, Victor X-Ray Corporation; Room 836, Frank S. Betz Company; Room 832, Radium Company of Colorado; Room 825, Chas. H. Phillips Chemical Company; Room 830, Horlick's Malted Milk Company and Dr. G. H. Sherman; Room 826, Lederle & Company and Hynson, Westcott & Dunning. Other rooms may be taken later by other firms, which will add to this list.

ACCORDING to a recent announcement, Harvard University is to have a School of Public Health, such school being made possible by the Rockefeller Foundation. The new school will be housed in an existing building immediately adjacent to the medical school, but the work will be developed in close relations with other divisions of the University, especially the medical school. It will provide opportunities for research, will unify existing courses and will offer new or extended teaching facilities in Public Health Administration, Vital Statistics, Immunology, Bacteriology, Medical Zoology, Physiological Hygiene and Communicable Diseases. Practical field experience and practical experience in Industrial Hygiene will be afforded the students through cooperation with the laboratories, hospitals, and public health agencies and the manufacturing and commission corporations in Boston.

THE semi-centennial celebration of the American Public Health Association will be held in New York City, November 8 to 18. The program includes a Health Institute to be held from the 8th to the 12th, during which time there will be organized demonstrations of various types of public health activities in New York and environs: Health Department Bureaus, Laboratories, Health Centers, Clinics, Hospitals, etc. The scientific session will be held from November 14 to 18. The program is divided into the following sections: Laboratory, Vital Statistics, Public Health Administration, Sanitary Engineering, Industrial Hygiene, Food and Drugs. There also will be special programs on Child Hygiene and Health Education and Publicity. An interesting feature of the celebration is the fact that Dr. Steven Smith, the founder and first president of the Association, now living in his ninety-ninth year, will be the guest of honor at a banquet to celebrate his approaching centennial. Detailed information concerning the celebration may be had by addressing the Association at 370 Seventh avenue, New York City.

AN attractive innovation in medical meetings has been undertaken by the Mississippi Valley Medical Association, to be held in St. Louis on October 13, 14 and 15. For this occasion a most unusual program, entirely free from the ordinary trite and formal medical paper reading, has been arranged.

Program participants have been carefully selected from eminent specialists among the leading authorities in the various fields of medicine. The preliminary announcements contain such names as Dr. Llewellys F. Barker, of Baltimore; Dr. Anthony Bassler, of New York; Dr. Chas. H. Frazier, of Philadelphia; Dr. John de J. Pemberton, of Rochester, Minnesota; Dr. Isaac Abt, of Chicago; Dr. C. Jefferson Miller, of New Orleans, and others of equal prominence. These noted clinicians have accepted invitations to give scientific addresses (not papers) consisting of clinical demonstrations and discussions upon borderline subjects pertaining to their particular specialties. Because of their clinical bearing and wide medical scope, the subjects chosen will undoubtedly be of more interest to the general practitioner than to the specialist.

The third day of the program will be given over to clinics in the various St. Louis hospitals and universities, at which the guests of this Society, as well as St. Louis physicians, will participate.

The date of this meeting coincides with the Centennial Celebration and Pageant of St. Louis, which event will no doubt afford additional means for entertainment and social enjoyment to those attending this meeting. Dr. William Engelbach, University Club Building, St. Louis, is chairman of the Committee of Arrangements and will answer inquiries requesting further information.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	87
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	24
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	27
15.	Washington	Irvin Huckleberry	5	13
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19
18.	Allen	Miles F. Porter, Jr.	95	105
19.	Greene	W. R. Cravens	16	18
20.	Henry	C. E. Canaday	25	29
21.	Switzerland	R. M. Copeland	7	8
22.	Fulton	A. E. Stinson	15	17
23.	Jay	C. A. Paddock	18	20

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the curative claims made for them were unwarranted: Hoffman's Celebrated Mixture (Solomons Co.), essentially an alcoholic solution of copaiba and opium. Aspironal (Aspironal Laboratories), essentially a solution of sodium salicylate, cascara, a small amount of mydriatic alkaloids and a trace of menthol. Lozon Pills (Lafayette Co.), consisting essentially of ferrous carbonate, nux vomica, damiana, arsenic and a laxative plant drug. La Nobleza and Sin Igual (Juan Gandara), the first, a solution containing plant extractives, including saponin (sarsaparilla), a plant laxative, sugar, alcohol, water and traces of alkaloids; the second, a watery solution containing gum, a plant laxative, licorice, and faint traces of alkaloids. Silverstone's Internal Remedy (H. Planten & Son), capsules containing resins and volatile oils, including copaiba and cubebs. Yellow Pine Compound (Yellow Pine Extract Co.), consisting of turpentine mixed with magnesium oxide and a small amount of jalap. Thomas Emmenagogue Pills (Palestine Drug Co.), consisting essentially of ferrous sulphate, aloes and an unidentified alkaloid. Nyal's Prescription "23" and Nyal's Prescription "23" Pills (Nyal Co.), the first a liquid consisting essentially of zinc sulphate, boric acid, Golden Seal, glycerine and water; the second, consisting essentially of ferrous sulphate, copaiba balsam, oleoresin of cubebs and alkaloidal material.—(*Jour. A. M. A.*, Aug. 6, 1921, p. 481).

MODE OF ACTION OF SOME COMMON LAXATIVES.—Calomel has been currently represented to act by promoting the secretion and retarding absorption, so that an accumulation of the abundant fluid and the consequent evacuation of the semisolid contents ensues. However, a recent investigation in the Pharmacologic Institute in the University at Utrecht by Van der Willigen indicates that absorption in the gastro-intestinal canal is not interfered with in the presence of calomel, and that the drug functions by promoting more vigorous movements of the small and large intestine whereby the contents are propelled so rapidly toward the rectum that absorption

(Continued from Advertisements xxxvi)

BOOK REVIEWS

THE ALLEN (STARVATION) TREATMENT OF DIABETES WITH A SERIES OF GRADUATED DIETS. By Louis Webb Hill, M.D., Junior Assistant Visiting Physician, Children's Hospital, Boston; Alumni Assistant in Pediatrics, Harvard Medical School; and Rena S. Eckman, Dietitian, Massachusetts General Hospital, Boston, 1911-1916. Fourth Edition. Price $1.75. Boston: W. M. Leonard, 711 Boylston Street.

This little manual of one hundred and forty pages gives the details of the Allen treatment in a manner that can readily be understood by both physician and patient. The diet lists and recipes should be studied by every medical man who is attempting to treat diabetes. The book is of especial value for the patient because, as the authors remark, "It is not particularly important for a diabetic to know a great deal concerning the theory of the disease, but it is vital for him to be able to plan his diet intelligently, and to cooperate with his physician." Many physicians will be interested in the statement that "the consensus of opinion is now that it is best not to give soda bicarbonate to diabetics, and that acidosis can be by far better controlled by keeping the fat intake low". It is of some value to learn that Bond's Diabetic Flour and Gluten Flour, made by the Mayflower Mills of Fort Wayne, Indiana, contain, respectively, 40.6 and 28.6 percent of starch.

PHYSICAL DIAGNOSIS. By W. D. Rose, M.D., Lecturer on Physical Diagnosis and Associate Professor of Medicine in the University of Arkansas; Demonstrator of Clinical Medicine and Chief of the Medical Section of the Isaac Folsom Clinic; Visiting Physician Logan H. Root's Memorial Hospital, Little Rock, Arkansas. Second Edition. St. Louis: C. V. Mosby Company. Price $8.50.

In his foreword the author says: "In the preparation of the present volume the text has been largely rewritten and supplemented by new material in order to cover the recent advances in the subject." The book contains three hundred and nine excellent illustrations. The text is clear and well written. The work is divided into four parts; part one deals with the thorax, part two with the abdomen, part three with the head, neck and extremities, and part four with the nervous system. There is also a chapter on the x-ray as an aid in diagnosis by Dr. Dudley E. Mackey. This work can be recommended as a reliable text-book on physical diagnosis.

EPIDEMIC RESPIRATORY DISEASE. By Eugene L. Opie, M.D., Colonel, M.R.C., U. S. Army; Professor of Pathology, Washington University School of Medicine. Francis G. Blake, M.D., Major, M.R.C., U. S. Army; Associate Member of the Rockefeller Institute for Medical Research. James C. Small, M.D., formerly First Lieutenant, M.R.C., U. S. Army; Bacteriologist Philadelphia General Hospital; and Thomas M. Rivers, M.D., formerly First Lieutenant, M.C., U. S. Army; Associate in Bacteriology, Johns Hopkins University. Price $6.50. St. Louis: C. V. Mosby Co., 1921.

(Continued on Advertising page xviii)

THE ENDOCRINES?
The *Armour* Laboratory!

Suprarenal Cortex,
powder and three grain tablets.

Suprarenal Medulla,
powder and one grain tablets.

Placental Substance,
powder and five grain tablets.

Suprarenalin Solution, 1:1000,
Stable, uniform and non-irritating, water white and free from preservatives.

Suprarenalin Ointment, 1:1000,
very bland with lasting effects.

LABORATORY PRODUCTS

Pituitary Liquid,
Physiologically Standardized—obstetrical ½ c. c. Surgical 1 c. c. ampoules.

Sterile, Surgical Catgut—Ligatures
Plain, and Chromic (boilable), 60 inch and 20 inch.
Iodized (nonboilable) 60 inch.

"Just what a ligature should be."

Literature Upon Request

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CHICAGO

SAVE MONEY ON YOUR X-RAY SUPPLIES

Get Our Price List and Discounts on Quantities Before You Purchase

HUNDREDS OF DOCTORS FIND WE SAVE THEM FROM 10% TO 25% ON X-RAY LABORATORY COSTS

AMONG THE MANY ARTICLES SOLD ARE

X-RAY PLATES. Three brands in stock for quick shipment. PARAGON Brand, for finest work; UNIVERSEAL Brand, where price is important.

X-RAY FILMS. Duplitized or Double Coated—all standard sizes. X-Ograph (metal backed) dental films at new, low prices Eastman films, fast or slow emulsion.

BARIUM SULPHATE. For stomach work. Finest grade. Low price.

COOLIDGE X-RAY TUBES. 5 Styles. 10 or 30 milliamp.—Radiator (small bulb), or broad, medium or fine focus, large bulb. Lead Glass Shields for Radiator type.

DEVELOPING TANKS. 4 or 6 compartments stone, will end your dark room troubles. 5 sizes of Enameled Steel Tanks.

DENTAL FILM MOUNTS. Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.

DEVELOPER CHEMICALS. Metal, Hydroquinone, Hypo, etc.

INTENSIFYING SCREENS. Patterson, TE, or celluloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Cassettes.

LEADED GLOVES AND APRONS. (New type glove, lower priced.)

FILING ENVELOPES with printed X-Ray form. (For used plates.) Order direct or through your dealer.

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If You Have a Machine Get Your Name on Our Mailing List

GEO. W. BRADY & CO.
732 So. Western Ave. CHICAGO

The Benzyl Antispasmodics

In the time that has lapsed since June, 1918, when

Hynson, Westcott & Dunning

introduced

Solution of Benzyl Benzoate —Miscible, H. W. & D.

many various forms of Benzyl esters and imitations of the original product have appeared. The claims for these preparations are as varied as their number and to some extent at least have served to confuse the medical profession as to the value of Benzyl therapy. For complete information as to the proper use of Benzyl preparations and a list of their indications, write

Hynson, Westcott & Dunning
BALTIMORE

(Continued from page 338)

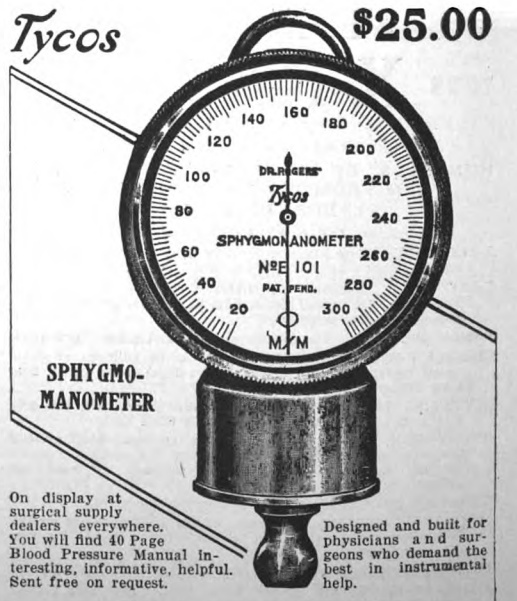
This book describes the studies made by the authors at Camps Funston and Pike during the epidemic of respiratory diseases in 1918. Chapter one deals with the etiology of influenza and the authors are of the opinion that "consideration of all the evidence available makes it seem highly probable that the B. influenzæ is the specific etiologic agent of epidemic influenza". It is seen in chapter two that the authors regard influenza as a relatively mild disease which tends to rapid spontaneous recovery and they look upon pneumonia simply as a complication. It is of significance, as they point out, that "pneumonia following influenza presents no uniform clinical picture, no uniform bacteriology and no uniform pathology". Chapter four is devoted to the study of the pathology and bacteriology of pneumonia following influenza and embraces considerably more than a third of the entire book. There are chapters on secondary infection in the ward treatment of measles and the pathology and bacteriology of pneumonia following measles, while in the final chapter Opie gives a summary of the investigations and the conclusions reached. The authors have justified their scientific reputations by producing a book which will be read by all those who are interested in this subject of epidemic respiratory diseases.

OPERATIVE SURGERY. By J. Shelton Horsley, M.D., F.A.C.S., Attending Surgeon, St. Elizabeth's Hospital, Richmond, Va. Price $10.00. Pp. 721, with 613 original illustrations by Miss Helen Lorraine. St. Louis: C. V. Mosby Company, 1921.

Of course, Dr. Horsley has written an excellent book. The book is of particular value because it is to a great extent the record of the personal experience of a distinguished American surgeon. Dr. Horsley states in the preface that "No attempt has been made to include in this volume all surgical operations. Such an enclycopedia is found in many excellent text books and systems of surgery. Every operation that I have described is either one that I have done or else an operation that appears to me to be the one best suited for the disease." The author tries to stress the preservation of physiologic function. In the first chapter, labeled "General Considerations", Horsley quotes frequently from Cannon and, in an instructive manner, discusses many of the problems in physiology which confront the surgeon. When one reads the chapter on drainage he has a feeling that possibly the author, like most surgeons, is a bit unsettled in his own mind as to the indications for and the value of drains. Chapters six and seven set forth Horsley's well-known views on blood transfusion and the suturing of blood vessels. There is also a short chapter on reversal of the circulation wherein it is shown that a reversal does not take place after an anastomosis of the femoral artery and vein and that, in impending gangrene of the feet, the same therapeutic results can be obtained by simple ligation of the femoral vein. As the book only includes those procedures which in the author's personal opinion are of especial value one should find no fault with the exclusion of many accepted operations, however, considering its importance the method of performing a thyroidectomy has been slighted. The author takes some pains to prove that the best method of treating the stump of the appendix is simply to ligate and disinfect it. Horsley is a bit careless about giving credit for originating methods, for instance, he speaks of the "method of Murat Willis" in which the stump of the cystic duct is buried, after cholecystectomy, and the wound closed without drainage. Although Horsley and Willis both live in Richmond, Virginia, the method was described by Witzel at least twelve years before it was practiced by Willis. The splendid illustrations by Miss Helen Lorriane are deserving of particular praise.

THE EVOLUTION OF DISEASE. By Prof. J. Danysz, Chef de Service Institute Pasteur, Paris. Translated by Francis M. Rackermann, M.D., Assistant in Medicine in the Harvard Medical School; Assistant in Medicine in the Massachusetts General Hospital, Boston, Massachusetts. Price $2.50. Philadelphia and New York: Lea & Febiger, 1921.

This fascinating little book will repay the time and effort spent in its reading and study. The author discusses the immune reactions occurring in infectious and non-infectious diseases, and he develops a theory of immunity, of anaphylaxis and antianaphylaxis. The author has decided that "all the chronic morbid states with their periods of acute crises alternating with longer or shorter remissions, originate from antigens, and are determined by the state of immunity—anaphylaxis of the organism. The experimental confirmation of this hypothesis has shown in reality that the anti-anaphylactic treatment is of unquestionable efficacy in all these chronic diseases in which we have been able to apply it up to date (except organic mental diseases) and a long series of observations corroborates this." The case reports of chronic diseases, especially dermatoses, treated by antigens obtained from the intestinal flora are unconvincing.



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ORIGINAL ARTICLES

SUBMUCOUS RESECTION OF NASAL SEPTUM*

KARL T. BROWN, M.D.
MUNCIE, INDIANA

Submucous resection of the nasal septum has long since been of especial interest to me because a large part of our nasal cases are of the type known as septal deflections, and, further, because a great part of our throat and accessory sinus cases are a direct result of nasal obstruction,

I shall not attempt to offer anything particularly new on the subject, but will discuss the methods of correction of this defect that I have found to be the most satisfactory, and I take it for granted that most of you have discarded the older methods, and are doing some of the submucous operations. I do not think any of the various methods in use are perfect in themselves, but all have their "selling points", and I usurped the best of them for use in given cases.

Let us discuss for a moment the various forms of deflections and the indications for a resection as well as the contraindications.

I prefer to place deflections in three classes, namely, simple, slight and extensive. By simple deflections I mean those deflections in which there is only a small amount of interference. By slight deflections I mean those deflections in which the deflection is more pronounced, and in which there is at all times an interference with drainage and this class is usually confined to one side. By extensive deflection I mean those cases in which there is complete closure and interference with drainage and respiration of one or both sides, and it is usually both sides in this class.

As to indication for operation in the first class, would say that only when other means have failed would I operate. In the second and third class, operation is always indicated where there is interference of drainage and respiration, as there will be in these classes, and especially if associated with chronic inflammation of the accessory sinuses, diseases of the pharynx and certain middle ear affections.

As to contraindications, I would consider the age of the patient, and would not operate on a patient living on borrowed time, as it is not a life saving operation, and I would not, except under exceptional circumstances, operate on a child under sixteen years of age, as it has been proven that the development of the septum has a marked influence on the face in the adult life, and Lathrope reports that out of eight cases in children under thirteen years of age, on whom submucous operation was made, five showed a marked depression of the tip of the nose. Syphilis and tuberculosis of the tract is another contraindication of importance, as is chronic kidney inflammation, carcinoma and other general conditions, the prognosis of which would lead to expect an early death. These would, in my opinion, be contraindication for a resection.

Having tried most all methods of anesthesia, including general, the pack method of cocaine solution, the cocaine crystal, etc., I have discarded them all for the cocaine spray to which I add my adrenaline solution, and in the use of this spray I have found that with a good atomizer, such as the De Vilbiss Atomer No. 16, I get a complete anesthesia in very little time by making a spray into each nostril after which the patient is instructed to blow the nose, which takes out the surplus, and the spray is again repeated in each naris, and the patient again instructed to blow the nose, and after a few repetitions of this process I find I have complete anesthesia for the entire operation.

Anesthesia being completed, I remove all hair within the nares, by clipping close with sharp pointed scissors, after which I irrigate each naris, and, if necessary, use the Sorensen suction apparatus to draw out all mucus and pus that may be dammed up behind the obstruction.

My next step is to introduce in the naris in which there is the greatest convexity a Freer's submucous nasal speculum, and with the nurse standing behind the patient, she makes traction outward and backward, thus giving me plenty of room and a clear field for my initial incision.

*Read before the Eye, Ear, Nose and Throat Section of the Indiana State Medical Association at the South Bend session, September, 1920.

which is made through the mucoperichondrium and is vertical and almost invariably on the side showing the greatest convexity, and for this incision I use the Ballenger septal knife, extending the incision from well up under the dorsum of the nose down into the floor of the nose. In making the vertical incision, I do so for the reason that it has given me more satisfaction than has any modification, for there is less gaping of the wound, and hence a less amount of granulation called for to fill up the wound.

Having cut down through the mucoperichondrium to the cartilage, I then use a Freer submucous elevator and strip the perichondrium free from that side. Then, with the Ballenger septal knife I enter the original wound and cut through the cartilage, having inserted my finger in the opposite nostril as a guide and protection against perforating the mucoperichondrium of that side. Then, with the Freer elevator, that side is stripped, after which I insert a Foster-Stein submucous speculum, straddling the cartilage. With the Ballenger swivel knife, the cartilage is cut along its upper border as far back as possible, the knife is brought down and forward, completely severing the cartilage, which is then removed and after correcting its abnormalities it is placed in normal salt solution to be replaced in the wound at completion of the operation to give support to the membrane and have a near approach to the normal septum. The cartilage having been removed, the next step is to remove the Foster-Stein speculum, and a pair of Freer's right-angle submucous speculums are inserted within the wound, and with the nurse standing behind the patient, traction is made outward and backward on the wound, thus giving me a clear field of vision, and with the Mials ridge forceps biting off the bone well up and backward, and along the floor, we make our correction. The Freer septal chisel is used to remove the crest and it is important that enough bone be removed at this point, as I have seen many cases in which the operator had failed at this point and the patient was not much better off than had he not had an operation at all.

The edges are now smoothed off and the wound cleared of all debris and the speculums removed, after which a dry Simpson intra-nasal tampon is inserted in each nostril, and, with a dropper, the tampons are saturated with sterile water, thus swelling up and giving even pressure on both sides. These remain for twenty-four hours, after which they are removed and the nares irrigated with Dobell's solution, and this solution is used as an irrigation once per day for three days, after which no further attention is demanded.

I prefer to keep the patient quiet for a few hours after the operation, and, as a rule, permit them to resume their work on the third day, and possibly sooner, depending on their occupation.

DISCUSSION

DR. TOMLIN (Indianapolis): This paper has been a clear exposition of the essayist's method of deciding upon the class of cases which he would operate, and also a definite delineation of his method of operating. There are a good many ways of doing a good many things. They all have good points, and if we could combine these good points with those that we have already been able to reach, we would improve our technique. And after one has improved his technique, he can take advantage of many situations to shorten the time of his operation.

I think the Doctor's classification is particularly good. It is simple, and if my observation holds true, simplicity is the point to which all improvement tends. He bases his classification upon pathological grounds. You see many cases with large angularities in the septum where there does not seem to be any trouble because of it. They may be engaged in some occupation where they come in contact with considerable sepsis, but something else in the contour of the lumen takes the place of a straight septum, they have good drainage, and, except for a slight cold for which you may be consulted, there is no trouble at all. Such cases may not be subjects for operation, and should not be.

Then, on the other hand, we find a deformity in the septum, which, from a physical and a visual standpoint is very slight, and yet we find that patient continually having recurrence of nasal infection or sinus inflammation, and the correction of this slight deformity will accomplish very much for him, more, sometimes, than in cases where there are greater deformities. So I commend this classification. It is scientific, and it is also, what is of very much more importance to the patient, very practical.

I am not able to agree with the essayist in his conclusion as to the age at which patients may be operated. If I remember correctly his position in the matter was very largely one of quotation. I have not observed, in operating on quite a number of children at twelve years of age (and I have operated even as early as eight years of age, and some of those cases are as far back as ten years now), that it has really made any difference in the apparent development of the nose, and in some of those cases it seems to have made a very marked improvement in the development of the child. I think that we should go into those cases a little more closely than we would in an adult, but where a child is suffering from a poorly ventilated and poorly drained nose, is becoming pigeon chested, and has a tendency to become asthmatic on account of a poorly drained nose, then I think that

septum should be straightened, and the child should be given an opportunity for bodily development.

I have not used the cocaine spray, but hearing it so warmly commended here I am going to try it. It is certainly simple, and if it is effective I am for it.

I have used the Freer method of the adrenalin cotton dipped in flaked cocaine, but I am aware that the necessary manipulation of even very gentle rubbing of the mucous membrane repeated three times does give rise to some mechanical irritation of the membrane, and if I can avoid that by using a spray just as effectively, then I shall use it.

In a number of cases I have used the Sluder method of the tampon placed over the sphenopalatin ganglion and over the nasal nerve. That does very well, but you have to wait a little while—about fifteen minutes.

I do supplement the Doctor's incision to some extent. As I remember, he spoke of it as going well down to the floor of the nose. In my cases I make an incision down to the floor of the nose, and make as near the junction of the skin and the mucous membrane as I can, trying to leave a little of the skin as a selvage edge, and when you put the flap over with the selvage edge of skin the nose heals very well and you never have any trouble with it. I do not replace cartilage in these cases, or at least in all of them, as I understood the essayist said he did. I always preserve it, and if by some unfortunate chance I should have a little rent in the membrane I put a piece of cartilage opposite that rent.

There is one point in the development of the operation that I would like to recommend to you, which will save much time. When the ridge of the vomer is deflected, and the cartilage has been hypertrophied, it is rather a useless waste of time to dissect down underneath and go all the way back and take up ten or twenty minutes of time. Use your "V" shaped chisel, running the upper point between the perichondria, and the other point under the membrane, and you can run it straight back and take it all off at once. You can do it in about three minutes. Some operators who are skillful and experienced put in fifteen or twenty minutes or longer time than that gently, carefully and persistently dissecting the septum to get in underneath. The "V" shaped chisel will take it all off at once, and do it very nicely. In these cases I am in the habit of using tampons that are well saturated with oil. It makes them come out so easy. You can use an inch strip of iodoform gauze saturated in sterile olive oil, and it packs very nicely and removes very easily. Formerly I left these packings in for 48 hours, then I changed to taking them out in 24 hours, and now I find if I take them out in twelve hours they do better, heal more rapidly and with much less trouble.

Fortunately up to the present time I have never had an infection in a submucous operation. I might meet my Waterloo tomorrow, but it has served the purpose very well to wipe these cases out well with dry cotton, gently mop the surface, especially the anterior part, with fifty percent tincture of iodine and alcohol before I make the incision.

In regard to irrigation following the operation, I followed the instructions of my predecessors in this line of work, and found that my cases were too much prolonged, that they did not do as well or heal as quickly as they ought to. Then I had some cases that came in for operation, and they got out of my hands earlier than the ones that I had been taking care of before, they left the city or for one reason or another they got out of my hands, and I found they did a great deal better than the ones I irrigated, so I quit irrigating.

DR. D. O. KEARBY (Indianapolis): I have found better postoperative results by making a pretty free drainage incision low down on the flap, on the opposite side to my primary incision. It heals readily, and where there is accumulation of serum in between the flaps, as will usually occur, it finds free exit through the cut and obviates a stuffy nose, which one frequently will get.

There is one other thing that I would particularly call your attention to in doing a submucous operation. The average patient coming to you from his home in town or in the country is generally immune to the infections that may be about him, and you get along nicely with him. But in our work in the city of Indianapolis we have more or less of these operations to perform upon nurses, students and internes who live about the hospitals. I would urgently emphasize the point that any patient coming from any sort of an institution where they are in contact with all sorts of infections, be kept away from such place of residence for ten days or two weeks before you operate. There is danger in doing a submucous operation just as there is in tonsillectomy.

I had an unfortunate experience with a patient who came to me for operation, and who had been living in a hospital. One experience is sufficient, and I now make a special inquiry of my patients as to where they are living, their mode of living, and I want them in the best sort of condition before I do a submucous operation.

I have found one condition in the nose that I frequently do a submucous operation for, not because the nose has not good drainage and

free respiration, but because of headache. Usually the patient has been to the ophthalmologist, and the ophthalmologist has found an error of refraction. Appropriate lenses have been prescribed, but the patient will have failed to secure the relief anticipated. To discuss the thing properly one would have to go back to the histology and the pathology of how these things arrive in the nose. There will be a deflection of the septum high up, bringing it over in contact with the anterior edge of the middle turbinate bone. The least little congestion or cold causes a swelling, and the patient has a headache that will be over that particular side affected, radiating back over the temporal region, and frequently they will complain of a peculiar pain in the ear. You examine the ear and find no evidence of pathology, but upon examination of the nose you will find the above mentioned conditions. By placing a small pledget of cotton, saturated with a 4 percent solution of cocaine against the anterior end of the middle turbinate, or else go back, as Dr. Sluder recommends, and anesthetize the sphenoplatine ganglion at the posterior tip of the middle turbinate, and your patient gets relief in just a few seconds. I find that doing a submucous operation and relieving that deviation high up where it comes in contact with the middle turbinate gives some brilliant results.

DR. CHARLES J. ADAMS (Kokomo): In 1905 I had this operation performed on myself, and on trying to drink a cup of coffee following the operation I found that I couldn't swallow very well. The packing in my nose would move forth and back like a piston, causing a lot of trouble. I thought there surely must be some way of remedying this trouble, so I decided in my septum cases to place a rubber tube with a lumen about one-eighth of an inch in diameter in the floor of the nose in the side opposite to the incision. The nose acts as an escape valve whenever you swallow, and this procedure allows the air to blow out through this tube and relieve the pressure in the ora-pharynx and your dressing does not move back and forth in the nose.

Whether this is original with me or not I don't know. But if you have never tried it, I would advise you to do so. Put in a sterile tube in the side opposite the incision. If the tube stops up you can take a dropper and wash it out. The patient gets just a little air through that tube, and it helps a whole lot.

DR. W. A. HOLLIS (Hartford City): There is one procedure as practiced by Dr. Brown that personally I would not endorse, and I see no occasion for doing it. That is, replacing the triangular cartilage or any part of it. The support of the nose is not dependent upon the triangular cartilage. The bridge of the nose will not sag unless you have a chondritis and a chondritis is not going to develop without an infection, or unless the patient is a syphilitic. By re-introducing this cartilage you are liable to create a space which will permit the accumulation of blood clot, and in that way prevent the apposition of the new periosteal and perichondrial surfaces.

We can recall instances in which children, for instance, have fallen on the sidewalk upon their faces. The fall had separated the perichondrium from the cartilage on either side, resulting in the pouring out of lymph. If an infection is not introduced, it will be absorbed, the cartilage will become re-attached to the perichondrium. But in the presence of an infection the triangular cartilage is absorbed, and with it the cartilage of the ridge, resulting in a sagging nose. So in the replacing of the cartilage which you have removed you may have this same condition. The nose is not clean; it cannot be made clean. We operate so successfully and get such brilliant results because of our immunity.

As to the submucous resection upon very young children. You seldom get a good result. The ossification centers are not complete until the ages of fourteen or fifteen. The septum continues to grow, and if you remove any part of the bony septum there may be new deformity spring up. And if you attempt to improve a submucous resection on an individual that has been operated upon in childhood, in which the results have not been good, my experience is that every time you make the condition worse. However, if the deflection is of the triangular cartilage alone, and the child is very young, and the nares occluded, I think you are justified in removing that triangular cartilage *in toto*, or as much as is necessary. But do not touch the bone.

Another mistake that is sometimes made in a submucous resection is in not taking out all the deformity. You cannot go too high; if the deflection extends to the cribriform plate go to it, because you will not have a meningitis. The flow of the lymph is down and outward, instead of meningeal-ward.

DR. M. H. KREBS (Huntington): It has been my experience that the long contact of a tampon within the nose, say 24 hours, is very objectionable. In the first place, that tampon, although put in dry, collects a good deal of mucus, and I judge that Dr. Brown has reference to the compressed tampon which expands with the addition of either water, mucus or blood. It has a great tendency to press on both sides, and I have very seldom seen a flap, after the tampon was taken out, which did not show evidences of pressure. The removal of the tampon after 24 hours *in situ* always means more or less

tearing of the wound. As a rule, I perform the operation practically the same as the essayist has shown, but I do not leave my pack in longer than 12 hours. After operating I leave the pack in six hours. At the end of that time I change it and leave the second pack in over night—twelve hours, and remove it the next day. I do not repack. I do not use the dry pack any longer, but use small pledgets of gauze moistened with an antiseptic oily preparation. I find I get better results in that way.

I fully agree with Dr. Kearby that operations upon nurses or doctors or others who are in hospitals or institutions, are sometimes attended with unfortunate results.

DR. C. NORMAN HOWARD (Warsaw): One of the discussants mentioned a little operative detail which I picked up some years ago and would like to emphasize. That is, just as the submucous resection is finished, the making of an incision with the knife for about one to one and a half inches along the floor of the mucous membrane of the septum out onto the floor of the nares. I believe this cut is better made on the same side as the original incision, as one can see more easily and there is less danger of mutilating the other mucous membrane than if the cut is made through the latter.

This inferior incision heals up kindly and in the meantime permits immediate drainage and lessens the chance of a large blood clot forming between the two mucous membranes of the septum.

DR. KARL T. BROWN (Muncie): With reference to what Dr. Tomlin said relative to replacement of cartilage, I would not leave the impression with him that I always put in the cartilage after taking it out, but as a rule I do. I take exception to what Dr. Hollis said as to infection following replacement. I cannot recall a case where I had any bad results in so doing. I generally get union.

As to children, I stated in my paper that I would operate on children under exceptional circumstances.

I agree with Dr. Kearby in regard to operating on cases coming from hospitals. I think that is a point well taken. Especially was that impressed upon me during my term of service in the army, and more particularly after the armistice, when we got into Germany, where we were getting bad results. We did not know why we were getting those infectious results. The cases were being sent in to us from all over the area, and generally they came from the billets where they were located. The troops were billeted in German houses, and almost invariably we could trace it back to some kind of infection that was prevailing in the district at the time, whereas if we had kept them, as Dr. Kearby said, for ten days before operating, we would have gotten away from that.

As to Dr. Adams' escape valve, I have never tried it, but it strikes me as worthy of consideration.

THE PREVENTION OF DIPHTHERIA*

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The vital statistics for South Bend for 1920 show some interesting, instructive and alarming things about diphtheria. There were eighty cases of the disease reported that year. Seventy of these were in children under twelve years of age, verifying the observation made by health authorities that the greatest susceptibility to diphtheria lies in children under the teens. There would have been a greater incidence of the disease but for the timely use of antitoxin as a prophylactic measure. So far as our investigations could determine, almost every child exposed to the disease was immediately immunized. One physician, however, immunized only those whom he thought were susceptible. If a child presented a robust appearance, with normal condition of the throat, he gave it no attention. But he missed his guess in one instance when a little girl he "gave no attention" after being exposed, contracted the disease and died. It is safe to assume he will play safe in the future.

A sick child was sent home from one of our public schools in the fall. The next day it was quarantined for diphtheria. The school nurse, on her own initiative, immediately examined every other pupil in the sick one's room, obtaining swabs from each throat for laboratory determination. The following day two of the youngsters were sent home and placed under quarantine on the report of our bacteriologist that their throats were infected with Klebs-Loeffler bacilli. This raised a storm of protest from two families because the children "were not sick," but the quarantine was maintained until two negative cultures on successive days had been obtained, because the affected ones were diphtheria carriers and a menace to others. Here was a potential epidemic "nipped in the bud" by the prompt and intelligent action of a trained nurse. Can any stronger argument than this service rendered the community be offered concerning the value of the school nurse? This is only one instance showing her worth. Many more could be cited.

South Bend is fortunate in having a progressive physician, Dr. R. B. Dugdale, on its school

*Read before the Health Officers' School, State Board of Health, May 11, 1921.

board. Through his instrumentality our public schools have been supplied, not only with nurses, but also with equipment, in some of the buildings, for free dental service to the pupils from indigent families. More are in prospect.

As a rule the diagnosis of diphtheria is made on the bacteriological findings of swabs sent to our laboratory by the physician in charge of the case. But we have found that it is not always safe to depend on the laboratory for the diagnosis. One of our fatal laryngeal cases had its chances for recovery lost because the first swab returned a negative culture which caused a delay in the administration of antitoxin. A second culture on the following day turned out positive, but antitoxin was then of no avail. It is my practice and advice to the profession to take no chances with croup in a child, but to resort at once to anti-toxin. If the patient recovers, one can feel he has saved another life. If it dies, one can feel he has done all science could offer.

There were ten deaths from diphtheria during the year, making a mortality of 12.25 percent. All but one, who was 13, were under ten years of age, harmonizing with published statistics showing that 90 percent of the fatalities from diphtheria occur in children under ten. With a single exception, a little tot moribund when the doctor first saw it, dead before the remedy could be brought to the bedside, all had received antitoxin some time during the course of the disease. Sixty of the eighty cases and two of the ten deaths were reported before December 1st, making a death rate of one-third of one percent for the first eleven months of the year. In December the disease appeared in a malignant form, causing a mortality of 40 percent (eight deaths in twenty cases) and vividly reminded me of the scourge diphtheria was in pre-antitoxin days. Two of the little folks died within 48 hours of the onset of the disease. Two died in one family after a somewhat protracted illness. (Last month, April, our mortality from diphtheria was 60 percent—3 deaths in 5 cases). The possibility of a recurrence of such a mortality on a larger scale gave me, as the guardian of the health of the children of my city, no little concern and much thought.

About this time Mr. Ward, of the Lederle Co., interested me in the Schick test and toxin-antitoxin mixture, which led to correspondence with the New York City Board of Health and finally to a program for a diphtheria prevention campaign in South Bend and vicinity. The program included addresses by Dr. A. Zingher, Assistant Director of the Research Laboratory of the Department of Health of the City of New York, to the medical profession in the morning, to the business men at the noon luncheon of the Chamber of Commerce, and to a mass meeting in the evening. No city funds being available for the work, our merchants, having the matter laid before them, heartily commended and agreed to finance the scheme. The press took kindly to the proposition and gave it much publicity. The Chamber of Commerce offered the use of its building for the meetings and gave every assistance possible. Circular letters were sent to all the doctors in the county, to the business men of the city, and to 6,000 parents to attend these meetings.

The morning session, an unusual time for doctors to meet, was attended from far and near, by a large number of the profession who were greatly interested in what they heard and saw of the Schick test and its reactions in the scores of children and some adults present who had been "Schicked" for the occasion. In appreciation of his work the physicians later sent Dr. Zingher a handsome "South Bend Watch", suitably engraved, and chain as a memento of his visit to our city. The business men's luncheon had its usual large attendance and all gave the speaker the closest attention. Even yet favorable comment is heard of that talk. The evening meeting, not as large as was expected because of other attractions, but comfortably filling a large auditorium, developed great interest in the doctor's remarks and statistics, and elicited many questions for the speaker's answer. At the close of the meeting many availed themselves of the opportunity to be Schick tested.

Every day for a week before the doctor's arrival the Schick test was applied to a group of children by Drs. C. S. Bosenbury, Milo Miller and M. D. Pelz, pediatricians on the staff of the Children's Free Dispensary, and Dr. E. G. Kyte, of Eli Lilly & Co., for demonstration by Dr. Zingher of the various stages of the Schick reactions. The tests were made with preparations from the New York City Board of Health. and the Eli Lilly & Co. Laboratories. The former is recognized as the standard, but I was glad to note that the latter, because it is an Indiana product, gave equally as good results. This demonstration proved to be the most important and profitable feature of the program in that it presented an opportunity to observe the various reactions of the Schick test which had not been seen before by most of the physicians present.

The outstanding features of Dr. Zingher's addresses were: the natural immunity to diphtheria possessed by a small percent of children, the value of Schick's test in the determination of susceptibility or immunity to the disease, and the certainty of establishing immunity in practically all with the toxin-antitoxin mixture. The

central topic of the talks was the Schick test. Great stress was laid on the point that the value of the test depended upon its proper application with a reliable preparation and correct interpretation of the reactions.

The technique of the application of the test is simple when once acquired, but not so simple as it appears to the novice. The fluid must be placed between the layers of the skin, not under it. Otherwise the test will be valueless, even with a standard preparation. The appearance of a white blister-like elevation at the point of injection is evidence of correct technique. I can recall no simple procedure requiring such close attention to details as the application of this invaluable test. Perfectly done its indications are unquestionable. Improperly applied it may lead to false security and disaster, place the test in bad repute, or bring censure upon the physician. A good syringe with short, inflexible needle will greatly facilitate the procedure of applying the test. Dr. Zingher recommends the "Record" syringe with 26 gauge quarter inch needle as the best for the purpose.

A surprisingly large number of positive reactions were found among the adults who took the test during the campaign. Among these were several physicians and nurses who have since taken the toxin-antitoxin treatment. It occurs to me to suggest to the fraternity and its nurse co-workers that they avail themselves of this protection, since they so often come in such close contact with the disease. "Physician, heal thyself," applies here. One of our prominent practitioners, a number of years ago, lost an eye through diphtheritic infection from a patient who coughed into his face while inspecting its throat. A stalwart and burly negro showed a "positive". Being greatly perturbed over the matter he approached Dr. Zingher with "Boss, wat's I gwine to do now since I's done gone wrong?" He later received three "shots" of the toxin-antitoxin mixture and is now as happy as usual.

The program for the elimination of diphtheria from our city is only just begun. It is to be a continuous campaign, with propaganda and other methods, until parents awake to a realization that it is not far from criminal carelessness to have their children die of diphtheria.

In conclusion let me repeat what I said, among other things, to the physicians of South Bend in a late circular letter along this line:

"Use the Schick test often, especially in children under twelve. Be sure of the reliability of the preparation. Look for the white blister-like elevation at point of injection. Understand the reactions—if positive urge toxin-antitoxin."

COEXISTING CHOLELITHIASIS AND KIDNEY STONE OF PROBABLE TUBERCULOUS ORIGIN

CASE REPORT

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Recent medical literature has dwelt at length upon the difficulties which often arise in the diagnosis of stone in the kidney, particularly the right, and the differentiation of this condition from cholelithiasis. Infrequently the two occur simultaneously, as shown by Bracht[1], and in such cases the utmost nicety of diagnosis is required, particularly if the clinical symptoms of one or both are atypical. Presentation of such a case, together with an admission of failure in its recognition, is offered.

According to the best authorities on the subject, actual stone formation is rare in the tuberculous kidney. Braasch[2] and Olsen[2] are of the opinion that when it does occur it is generally a phosphatic stone, formed in a localized abscess, with necrosis and secondary infection. As to the incidence of tuberculous cholecystitis, it is practically an unknown quantity. Korte[3] met with an example and furnishes references to six other cases which have been described. Positive proof of the tuberculous origin of the lesions in the case presently described is lacking, although every circumstance connected with it renders such a conclusion highly probable.

History. Mrs. J. A., a widow, aged 41 years, appeared for examination on Nov. 12, 1920, complaining of certain mild gastrointestinal disturbance and vague nervous symptoms. Her physician, Dr. C. W. Aitken, of Flemingsburg, Ky., had made a diagnosis of gallstones and had advised her to operation.

The family history was negative. At the age of thirteen she began to have pain in the right knee and thigh, with fever and loss of weight, and the development of a well-marked case of tuberculous hip-joint disease. There ensued suppuration, sinus formation, multiple incisions for the evacuation of the pus, with finally apparent cure, so that, at the age of twenty the head of the femur and a portion of the acetabulum had been destroyed, there was a marked spinal curvature, and the patient has since walked only with the aid of a crutch. At no time, during or since this illness, have repeated examinations by numerous physicians disclosed the presence of pulmonary or other forms of tuberculosis.

(1) Braasch, W. F., Clinical Data on Renal Lithiasis., Jour. Lancet., Oct. 15, 1913. pp. 561-564.

(2) Braasch, W. F., and Olsen, F. A., Radiographic Diagnosis of Renal Tuberculosis. Surg. Gyn. and Obst., 1919, xxviii.

(3) Korte, Prof. W., Beitrage zur Chiurgie der Gallenwege und der Leber, Berlin, 1905.

The patient is a seamstress by trade, and by inclination and occupation has always been a person of sedentary habits. She has never had any form of acute infectious disease other than measles and mumps in childhood. She has been troubled with chronic constipation for the past fifteen years, but aside from this has been comparatively healthy. She has never been pregnant and her menstruation is always normal.

About four months since her constipation grew worse, insomnia and nervousness developed apace and she complained of slight pains in the upper abdomen, particularly on the right side. The pain seemed to bear no relation to meals or to the character of the food. Fever, chills, nausea and vomiting, loss of weight and appetite, genito-urinary and other disturbances have all been absent. The abdominal pain has never been of a severe or continuous character.

Examination, Nov. 12, 1920: The patient is apparently well developed and nourished. Temperature, 99.2 deg. F. Pulse, 80. The lungs and heart are negative. There is a marked kypho-scoliosis of the lumbar spine. The abdomen is regular in outline, soft and not distended. Deep pressure below the right costal margin is painful. No other points of tenderness or other abnormalities could be discovered. Urinalysis of a twenty-four hour specimen showed an acid reaction to litmus, spec. grav. 1.020, albumin faintly positive, little sediment and no sugar. Microscopic examination of a centrifugalized specimen revealed only a few cells of renal epithelium and leucocytes, with an occasional red blood cell. Blood pressure was 140 systolic, 90 diastolic. The hemoglobin was 90 percent and the blood count normal.

X-ray examination of the gall-bladder region on Nov. 13th, by Drs. A. M. Cole and R. C. Beeler of Indianapolis, showed the shadow of a very large, kidney-shaped stone in the right hypochondriac region, with some smaller stone shadows in the same vicinity. Stereoscopic plates were examined, which apparently showed the stones to lie anterior to the plane of the spine. This would point very strongly to gall-stones, unless the kidney were floating, as would also the fact that the shadows were above the level of the twelfth rib. The spinal curvature might also be responsible for some confusion in regard to the position of the stones. Altogether, the roentgenologists were unable to determine whether the shadows were caused by stones in the kidney or gall-bladder, or both.

Operation, Nov. 15, 1920. Under nitrous-oxid-oxygen-ether anesthesia the abdomen was opened by Dr. J. C. Sexton with a five inch incision in the right semi-lunar line. A few old adhesions in the gall-bladder region were separated and the organ exposed. It appeared smaller than normal, with greatly thickened walls, yet distended with fluid. Upon incision there was drained about 20cc. of a glairy colloid fluid, together with three or four stones the size of French peas. Another stone, somewhat larger, was found impinged in the neck of the bladder, blocking completely the cystic duct. The stones were light and very friable, and were composed, evidently, of the phosphates and carbonates of calcium. The gall-bladder was amputated at the point of impaction of the stone and sutured with No. 1, plain catgut. A small rubber drain was left in the region of the stump.

Palpation of the right kidney made evident a large stone. The posterior peritoneum was incised and the kidney easily delivered into view. When cut the capsule stripped readily. Upon incision into the substance the stone was revealed and was removed easily without breaking into fragments. It weighed 9.4 grams and was apparently of similar composition to those found in the gall-bladder. The kidney itself showed no gross pathology, and in spite of the probable tuberculous origin of the stone, its removal was deemed inadvisable. The kidney substance and capsule were sutured with double, plain, No. 1 catgut and the posterior peritoneum was closed, leaving a small caliber drainage tube in the perirenal space. The peritoneum was closed with catgut and the muscles and fascia united with catgut and with figure-of-eight sutures of silkworm gut.

Outcome. The postoperative progress was uneventful. The patient was somewhat icteric for several days following. The drainage tubes were allowed to remain 48 hours. There was considerable hematuria for 36 hours, but this gradually subsided until the eighteenth day, when the urine became clear. The stitches were removed on the tenth day, the patient was allowed to sit up on the eighteenth and left the hospital a week later. Subsequent reports from her have been altogether favorable.

The following features of the case seem worthy of reiteration:

1. That the clinical symptoms were unreliable, both for kidney and gall-bladder disease.

2. That the usual urinary findings of renal disease were absent.

3. That the roentgenographic diagnosis was difficult, especially in regard to the identification of the renal shadow.

4. That the tuberculous history of the patient, the nature and composition of the stones and the comparative mildness of the symptoms, renders the diagnosis of tuberculous lithiasis the most probable, in spite of the rare occurrence of such condition in these sites.

Braasch[4] and Roberts[5] have emphasized the differential characteristics of extra- and intra-renal stone shadows, yet such distinguishing features were very much confused in this case.

It is probable that a pre-operative diagnosis might have been made in this case by use of the more refined methods described by Braasch[4], such as pyelography and tests of renal function, together with clinical, radiographic and cystoscopic data.

(4) Braasch, W. F., Recent Advance in the Diagnosis of Surgical Lesions of the Kidney. Minn. Med. 1920, iii., pp. 112-118.
(5) Roberts, Dudley, The Roentgenologic Diagnosis of Gall-Bladder Lesions. Jour. A. M. A. 1920, lxvi, pp. 561-564.

TRAUMATIC FRONTAL SINUS ABSCESS*

(An Acute Exacerbation of an Old Sinusitis)

CASE REPORT

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On December 3rd I was called by the family physician, Dr. Spencer, to see a patient at his home. The case was thought to be a frontal sinus disease. The patient was a man twenty-six years of age, a railroad mechanic by occupation. He stated that the present attack started on November 30th with severe headache; the pain being worse over the left eye, radiating over the temporal region. The eye became swollen and in forty-eight hours was closed. He had a few chills and fever as recorded by Dr. Spencer between 102½ and 103. No history of any nasal discharge since attack commenced. He gave a history of having had two similar attacks last winter, one in December and the other in February, but not so pronounced.

Examination. The left eye was markedly swollen, upper eyelid edematous and closed; marked swelling, induration and redness extended over left frontal and temporal regions. The area was very tender on pressure, especially just above supra orbital ridge, both internal and external to the supra orbital notch. I noticed a scar in the temporal region, well up above ear and slightly anterior. I questioned patient regarding scar and he said it was the result of an automobile accident in August, 1920. He was struck by an automobile and thrown about 15 feet, his head striking the hard pavement. He was taken to one of our best hospitals where he was treated by the hospital for a scalp wound in temporal region and contusion of left eye. He was discharged from the hospital the evening of the same day. No x-ray picture was taken at that time. The eye became very much swollen and also the area over the outer part of the frontal and temporal region became swollen and inflamed. The swelling over the eye continued for two (2) weeks, but the swelling over the wounded area subsided in a few days, and there was no further trouble until the present attack. On close questioning, he said that a little discharge came from the lower angle of the temporal wound, two weeks ago, about the middle of November. No discharge noticed in nose; infundibulum appeared blocked.

He was admitted to the hospital with a diagnosis of frontal sinus disease. X-ray showed large sinuses both sides; left side double; slight shadow or haziness over the left frontal. Next day, Dec. 4th, an intra-nasal operation was performed. This was done in order to see whether or not the intense swelling, induration and tenderness over the frontal and temporal regions and the orbital cellulitis would be reduced by establishing nasal drainage from the frontal sinus. The Mosher operation was performed; the anterior part of the ethmoid labyrinth was entered with a sharp curette. The curettement continued through this opening both forward then downward and backward until naso-frontal duct was enlarged. A hyperplastic ethmoiditis was encountered. A great deal of pus drained from the frontal sinus, which was irrigated with normal saline solution. The condition greatly improved each day and in three days' time the swelling and tenderness had disappeared to such an extent that the supra orbital ridge could be felt. For the first time it was noticed that there was an irregularity in the ridge, external to the supra orbital notch. On pressure at this point, tenderness was elicited and when this area was depressed with the finger, the patient complained of an increased amount of discharge in the nose.

On December 7th, the temperature having remained under 100 F., it was decided to do an external frontal sinus operation. On December 8th the Lothrop operation was contemplated, but after exposing a large area of the frontal bone it was abandoned because of the surgical findings. This exposure was made by an incision along the full extent of the supra orbital ridge, down through the periosteum. Pus was discovered oozing through a linear fracture beginning at the outer three-fourths of the supra orbital ridge and extending upwards one-half inch through the outer wall of the frontal bone, nicking the arch and probably involving, to a slight extent, the orbital plate of the frontal. This, undoubtedly, caused the very extensive orbital cellulitis. The external wall of the sinus was removed with gauge and bone forceps, the fractured part completely exenterated; pus and old granulation tissue removed from the sinus. The opening into the nose was enlarged with

*(Presented at The Indianapolis Medical Society)

rasps and cigarette drainage was inserted from the frontal sinus into the nose and wound sewed up, leaving a similar external drain at the inner angle of the external wound. Wet dressing of boric acid solution applied and kept wet for two to three days; the nose was sprayed daily with adrenalin solution. The patient showed steady improvement from day to day and was discharged from the hospital Dec. 16th. The frontal sinus abscess healed nicely. However, an orbital abscess developed and required three incisions at different times.

The case is of interest because it can be considered as a compound fracture of the outer plate of the frontal bone; or one, at least, that became compound as soon as the intra sinus communication was established. Because roentgenography failed to bring out the fracture—this was probably due to the fact that a long time had elapsed before the plate was made—the osteomyelitis had developed to such an extent that it obscured the line. The case emphasizes the fact that in all head injuries it is important to make roentgen plates and make them early.

The case is of interest because the patient seemed to lay greater emphasis on the old history of nasal trouble and frontal sinus disease than the injury received by the automobile—in fact, the injury was not considered of much importance by me until after the intra-nasal operation, which brought about a subsidence of the inflammation, whereby more knowledge of the external condition was obtained. The history as given prejudiced me to first establish intra-nasal drainage. Fortunately, this procedure turned out for the best, as it allowed the angry inflammatory symptoms, including the orbital cellulitis, to subside. Without such a history or with a little more emphasis on the injury, especially if the pathology of the injury had been suspected, I probably would have performed the external operation without the intra-nasal drainage. I am sure, however, if I had done so, the operation would have been followed by some reaction and greater sloughing. In all probability a single small cigarette drain would not have drained the abscess cavity—one would have had to deal with a large, open wound. The question may be properly asked:

"When given an old history of frontal sinus symptoms, is it a better surgical procedure to treat a traumatic frontal sinus abscess by first establishing drainage through the nose?"

Subsequent History. Patient returned with recurrence of orbital cellulitis which developed into an abscess. Over a period of a few weeks, several of these abscesses were opened and drained. They were usually confined to the outer aspect of the orbit, about on a line with the fracture. In spite of careful surgical treatment of these orbital abscesses the frontal sinus became reinfected and on March 1st it was necessary to do a secondary operation of the frontal. The old wound was reopened, frontal sinus thoroughly curretted and the naso-frontal duct enlarged. The old sinuses or fistulous tracts in the orbital area were thoroughly curretted. The external wound was sutured and healed by primary union. Internal treatment of the nose was continued for a few weeks. At present, May 10th, no discharge from frontal sinus and orbital and frontal area appear healed. The area feels hard and firm and no tenderness. I am indebted to Dr. Joel Whitaker with whom I consulted regarding the orbital abscesses and who assisted me in the secondary operation.

IMPRESSIONS FROM ONE HUNDRED MASTOID OPERATIONS

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Mastoiditis is a much more common complication of otitis media and the acute infectious fevers than usually is believed. In rare cases it occurs without primary infection of the middle ear. The recent use of the x-ray in diagnosis of this condition proves its existence to some extent in all cases of otitis media. At times only a plastic exudate occurs in the mastoid cells. This exudate many times is absorbed, with complete recovery. At times these cells are filled with straw colored fluid under pressure.

Mastoiditis occurs as a complication most frequently with measles and influenza. It also is found commonly with scarlet fever, diphtheria, pneumonia, rhinitis acute, chronic sinus disease, syphilis and mumps in about the order named.

Contrary to textbook descriptions, the finding of ear discharge, bulging of the drum membrane, pouching of the posterior superior external canal wall, tenderness over the mastoid with edema of the superficial tissues, separately and collectively, may not be present. Perisinus disease, septicemia and pus in the mastoid cells may not be characterized by pain. Two cases I have seen recently where hemolytic streptococci were found in the culture in the mastoid pus, showed no pain and no fever. The x-ray is invaluable in diagnosis, as well as in deciding when to operate. The increase in percentage of polymorphonuclear leukocytes, coupled with positive x-ray findings, in a case of otitis media acute which fails to subside within two weeks, is an indication for early operation in the absence of

*Dr. Green formerly resided at Albion, Indiana. He enlisted in the navy when the United States entered the World War, and at the close of the war re-enlisted. Recently he has been assigned to sea duty.

nocturnal pain and other classical symptoms and physical findings.

Many cases of influenza and measles show absorption of bone weeks and months after otitis media has entirely subsided. The patients complain of indefinite discomfort about the ear, with loss of weight, bronchitis and general malaise. The cells will be found to contain pus or pus with granulations. The blood shows a definite secondary anemia.

Early operation usually prevents the picture of chronic fetid aural discharge, loss of drum membrane and ossicles, with middle ear or internal ear deafness, also the complications of acute mastoiditis such as perisinus abscess, sinus thrombosis, septicemia, brain abscess, extradural abscess and lung abscess.

When everything has been considered, the surgeon's first impression as to the necessity for operation is usually correct. Procrastination has no place in the surgical treatment of mastoiditis.

In the presence of heart or lung complications it is safe and feasible to operate with local anesthesia in combination with an ounce or two of whiskey, and morphine in one-fourth grain dose. There is no more shock than under ether or other general anesthesia. The post-operative temperature rarely rises over one degree. Operation consumes no more time under local than under general anesthesia and is without pain to the patient. Procain (novocain) in one percent solution, with adrenalin, is acceptable as a local anesthetic.

The operative technic of choice in all cases of acute mastoiditis uncomplicated by perisinus disease, sinus thrombosis and brain lesions is as follows: Thoroughly curette all mastoid cells and open wide the mastoid antrum; then douche with peroxide of hydrogen or 3½ percent tincture of iodine; remove all fragments of bone and soft tissue; incise the membrana tympani freely; insert a cigarette drain into the mastoid antrum by the shortest route from incision to antrum; allow the blood to fill the wound; close the periosteum with two or three interrupted catgut sutures and the skin with Michel clips; apply a dry dressing of fluffed gauze. The blood clot thus formed in the mastoid wound and middle ear usually sterilizes the diseased mastoid and middle ear, even in the presence of hemolytic streptococci. The drains may be removed on the fourth day and the clips on the seventh.

Usually, or in about 66 percent of the cases which have been carefully and thoroughly operated, the wound heals by primary intention, leaving a linear scar without depression. The patient is saved the suffering of weeks of painful dressings required by the antiquated method of packing the mastoid with gauze daily, as has been the vogue for several years. If the wound should not be sterilized by the blood clot, nothing is lost and the wound will heal more quickly than with the packing operation and with a much less unsightly scar. The hearing usually returns to normal within two to four weeks. The patient is able to resume his usual labors in two weeks instead of six to twelve weeks. Much time and suffering as well as expense are saved in dressings.

In order to succeed in the blood clot operation, one must be sure that he has reached all infected cells and thoroughly cleaned them out, and that his asepsis is perfect. Naturally it is advantageous to operate early, before perisinus disease, sinus thrombosis or other complications have developed.

The blood clot operation is not a new operation but one which has been brought out of the ash can of disuse and slightly modified.

A DOCTORS' INFORMATION EXCHANGE

A. J. DE LONG

(In charge Doctors' Information Exchange at Lafayette, Indiana)

Before discussing the unique combination of circumstances which has made a Doctors' Information Exchange a possibility in a city of less than thirty thousand it might be well to explain what is meant by this service. Just what is its purpose? How is it maintained and operated?

The fundamental purpose of a Doctors' Information Exchange is to supply a permanent telephone service for each physician. Especially during evenings and on Sundays there are times when a doctor's telephones are unattended. Ordinarily a patient might call intermittedly for several hours but could receive no answer until either the doctor or his family returned. At times this obvious lapse in service might be annoying, sometimes it would be alarming, and again it might prove fatal. Any number of reasons might account for a physician's telephones being unattended. In these instances, when a lapse in service would otherwise occur, the Doctors' Information Exchange is available to answer all calls and give the matter immediate attention. This arrangement gives the physician greater freedom. He and his family can go at will, knowing that no call need go unanswered. Whenever a doctor leaves his telephones without attendance it is his duty to report his whereabouts to the Exchange. On the other hand, the public is directed to communicate with this Exchange should no one answer from the regular telephone numbers. In this cooperative manner the absence of any physician

can usually be explained. When a member reports himself at his club or at any place accessible by telephone it is an easy matter to direct calls to this number. If the doctor is not within telephone reach an effort is made to retain the call. In case the patient cannot wait, or should the physician be away for too long a time, it is preferable that the matter be directed to an associate; that is to say, to another doctor with whom arrangement has been made to temporarily care for this member's patients. Should the patient wish to summon a physician of his own choice rather than the one suggested he is free to do so. In either case the matter is reported, as the absent party will be interested to know of the call.

This service does not aim to do away with office girls. It is primarily intended to supplement prevalent methods. Efficiency rather than economy is the object. Nevertheless it might be admitted that in many instances this system has made an office girl unnecessary. The fact that this arrangement leaves no telephone calls unanswered does not imply that a doctor cannot seek rest or attend amusement without being liable to disturbance. The Exchange is strictly a confidential agency. What the physician says *goes*. Quite frequently a member will ask not to be disturbed unless it is absolutely necessary. By questioning a patient one can usually ascertain if the need is sufficient to call the doctor away from his interest.

An Exchange is also subject to inquiries of a general nature. Questions regarding office hours are perhaps most numerous. All accidents and calls for medical assistance are given immediate attention and are handled quicker than would be the case if calls were made promiscuously. The various departments of health, the coroner, the disposition of charity patients, etc., must be explained. Information will either be given or obtained.

The purpose and scope of this service now defined there comes the matter of operation and maintenance. The essentials of this system consist of a telephone (business line), an operator in charge all the time, the cooperation of the physicians, and the publicity. Inasmuch as the operation is exclusively telephone work, no public office is needed. Indeed, a private home is fully adequate. Two telephone lines are better than one for the simple reason that when calling out, incoming messages are delayed. The writer uses one line exclusively for incoming calls and retains the other for outgoing messages.

It will be found that the operator or person in charge of an Exchange is really the hub of the system. He (or she) must have patience, be willing and persistent, and always ready to safeguard the interest of any physician. Should a member who neglects to report his whereabouts be needed the operator must endeavor to find him. By referring to records of previous reports this is not a difficult undertaking. Human beings unconsciously move in the same circle. I have had doctors ask in surprise: "How did you know I was here?" To show a phase of the work I will cite one instance: It was a case of obstetrics ready for attention and the doctor had neglected to leave a report. I assured the party I would locate their physician immediately. First I called the office girl at her home, and fortunately she remembered the address to which the doctor had gone. But investigation showed no telephone at this number. Were my efforts in vain? With the aid of "central" I was able to call next door to the address. They in turn were kind enough to call the doctor to the telephone.

The reports given by the members of the Exchange make an interesting record. You soon learn a doctor's friends, his clubs, his politics, his religion, his favorite sports, and his other interests. You know where he sits in the theater and the kind of shows he likes best.

A Doctors' Information Exchange is entirely new to a community upon its inception. Before it can be successfully operated the public must understand its purpose. The people need to be educated to the idea. This was the greatest difficulty with which we had to contend here in Lafayette. There was no precedent to follow. To give the matter publicity newspaper advertisements were used but did not produce the desired result. Office display cards helped. The plan that did finally work is set forth in the clipping below which has been taken from the local telephone directory:

11991 Armstrong, C. W.....Res.....923 N. 15th St
7111 Armstrong, G. V.....Res.....2017½ N. 16th St.
336 Arnett, Dr. A. C.....Offi.....716-18 LaF. Life Bdg
480 Should no one answer from 336 or 3600 then call 480.
3600 Arnett, Dr. A. C.....Res.....516 S. 7th St.
2348 Arnett, Ed. R.....Res....100 E. Wood St. W. L.
6287 Arnold, A. G.....Garage..... Dayton, Ind.

This notice advertises the proposition permanently and places the publicity at the finger tips of anybody who looks for a doctor's number. The line of wording is used in connection with each physician's name, and the listing appears thirty-eight times in the text of the directory.

It is my candid belief that Lafayette is the only city of its size that maintains an exchange of this nature. The large city with its scores of physicians can easily support an Exchange. But the smaller city cannot pay for an elaborate system. What has kept the service away from these places is the belief that the enterprise is not practical outside of the larger cities. Granting that the undertaking has been found practical in one small community, will not the plan

be of interest to a great many other places? Perhaps many cities have within their surroundings a similar solution. At least it ought to be of general interest to know how we have put the idea across.

To fully explain how an Exchange has been made possible here I must get personal. Five years ago an illness left the writer an invalid and practically a shut-in. At the time I initiated the Doctors' Information Exchange I had no income outside of a small magazine subscription business. My telephone was always within reach, having installed same for my magazine work. In other words, I was confined to my home, with a telephone already installed, and greatly in need of something to do. What circumstances could be more favorable for the establishment of an Exchange? It was not only convenient for me to always be on the job but rather a necessity.

An arrangement of this nature requires the services of but one person, and consequently there is but one salary to pay. This amount is figured pro rata and might be estimated at the cost of a good office girl. Unless a person is confined from some other cause or circumstance he would not want this work at any price, as it would demand too much. The biggest requirement for a one-man proposition is the matter of confinement. The work itself is very interesting.

Some may think this solution more unique than typical; that what exists here might not be found elsewhere. There is no foundation to this argument. Every community has its shut-ins and elderly people. In this city there are persons who will gladly take up the work should I decide to devote my time entirely to other interests. To many it would be a veritable godsend to have something worth while to do. I know that the work came mighty welcome to me.

In this city the Exchange has been a success in every way. The physicians have repeatedly commended the service, the public is appreciative, and there have been inquiries from other places. Personally I am pleased with the enterprise. The undertaking renewed my interest in life when it had waned considerably. With the work my health improved, and through the publicity gained by this connection, my other business has prospered. In fact we have all gained something by the adventure.

Herewith are reproduced the application for the service and the card used in members' offices:

DOCTORS' INFORMATION EXCHANGE
Application Blanks

Doctor: Dr. John R. Smith.
Office phone: 723. Res. Phone: 722. Office-girl's Phone: 1023 (Res).
Office Hours (Day): 1 to 4 P. M. (Evening): Mon., Wed., Sat: 7 to 8 P. M.
Sunday Office Hours: By appointment only.
Home Hospital Hours: 10 to 11 A. M.
St. Elizabeth: 9 to 10 A. M.
Regular Calling Hours: 8 to 9 A. M., 11 to 12 A. M., 4 to 6 P. M.
At Home (Res.): 329 Oakwood Boul. Tel. 722.
Remarks: Club 79, Country Club 130, Church 4323.
EMERGENCY: If I cannot immediately respond to an emergency call please notify the following physician (inform me of such calls as well as telling other doctors that same is MY call):
Doctor: Dr. Wm. Brown or Dr. Chas. Jones.
INSTRUCTIONS: Whenever a doctor leaves the above routine he should call exchange and place such information.

Membership fee is one dollar (this assessment is to defray expense involved in installing business phone, advertising, etc.). Service fee is two dollars a month, payable every three months, and due the 15th of the first month. No change in fee can be made unless authorized by Medical Association.

This application properly filled and returned with membership fee is an agreement. Service will be opened at once.

MEMBER
DOCTORS' INFORMATION EXCHANGE
Please Notice

Whenever the doctor is not in his office, or at other times does not answer at his regular telephone numbers, call **480** for information regarding his whereabouts, when he will return, to leave your number, etc. This is a permanent telephone call, and an operator is in charge at all times.

Doctors' Information Exchange

THE REMOVAL OF FOREIGN BODIES FROM THE AIR AND FOOD PASSAGES*

LAFAYETTE PAGE, M.D.
INDIANAPOLIS, INDIANA

Today every laryngologist is expected to be able to remove foreign bodies not only from the larynx, but also from the trachea, bronchi and esophagus. Many of you who are familiar with the brilliant achievements of Chevalier Jackson through journal reports, or who have been so fortunate as to witness his marvellous technique in bronchoscopy, scarcely realize the expenditure of time, labor and money necessary to attain such perfection. It seems so easy for Paderewski to render a great masterpiece of music like the Emperor Concerto, of Beethoven, that we are apt to forget the study and labor of years necessary for even his splendid genius to produce such art. Perhaps there is no surgical procedure in which every detail of technique is so important and perfectly trained assistants are so essential, combined with constant practice on the part of the operator, as in the removal of foreign bodies from the bronchi and esophagus.

We should not forget that the bronchoscope and esophagoscope are dangerous instruments in the hands of the inexperienced and those without a natural sense of caution. It is not an art that can be picked up in an emergency by any physician who happens to have purchased the outfit described in the books. A number of tragedies are on record, and many more unrecorded, of brutal efforts to remove foreign bodies from the esophagus and air passages without knowledge or experience. On the other hand, the danger is very slight and the fatalities are very rare in the use of these instruments

*Read before the Indianapolis Med. Society.

in the hands of the skillful and judicious, while the results in the saving of life are among the most frequent and dramatic in the field of surgery.

In the following cases I have tried to record the results of my limited experience in as brief a manner as possible.

OPAQUE FOREIGN BODIES:

Among the most frequent opaque foreign bodies aspirated into the air passages or swallowed into the food passage are pins of various kinds, including ordinary pins, needles, safety-pins, and stick-pins of great variety. Jackson regards the ordinary pin or needle lodged in one of the smaller bronchi near the periphery of the lung as the most difficult to find and remove of all forms of foreign bodies. The lung will tolerate the presence of this form of foreign body for a long time with less reaction than any other. A case is reported by Doctor Mosher of a nurse who had a metal clasp pin in her lung which had been there for five years without producing any other symptoms than an occasional cough. Attempts to remove this pin on two or three occasions were made, once by Killian and once by Jackson, but without success. Such cases are exceptional. Few are so fortunate as to escape pneumonia or abscess of the lung soon after aspiration of a foreign body, or later development of tubercular infection.

Jackson sums up the matter fairly when he says: "We do full justice to our patients when we tell them that while a foreign body may be coughed up, the chances of this are remote and it is dangerous to wait, and further, the difficulty of removal increases with each hour that the body is allowed to remain."

It is in locating this class of foreign body that the x-ray and fluoroscope afford us the greatest aid.

CASE REPORTS

Case I. A young lady nineteen years of age, while dressing to be married, aspirated into the trachea an ordinary pin which she was holding in her mouth. This was followed by violent spasms of coughing, some pain, and slight expectoration of blood. Three hours after, under cocaine anesthesia, bronchoscopic examination was made per oral, and the pin found sticking into the tracheal cartilage, point upward, just above the bifurcation. The pin was grasped as near the point as possible, pushed downward and outward and removed through the bronchoscope. There was no reaction or after-disturbance.

Case II. A boy thirteen years old aspirated a pin while attending school at Shortridge. He was brought to our clinic very much excited and frightened, with spasms of coughing and dyspnea. Ether was administered and bronchoscopic examination per oral made. An ordinary pin was found, driven more than half its length into the tracheal cartilage about 10 c. m. below the cricoid cartilage. This was extracted, considerable force being necessary to dislodge it. Immediate recovery followed.

Case III. A young girl fifteen years of age, while picking her teeth with a blackheaded steel pin, flipped it into the throat and swallowed it. Efforts were made by the local physician to extract it by forceps without the use of an esophagoscope. He succeeded in grasping the pin, but in his efforts to remove it forced it into the vertebral column, and abandoned further effort. An x-ray examination was made, locating the pin sticking through the esophagus into the body of one of the vertebra. An esophagoscope was introduced and the pin found after diligent search. The esophageal membrane was edematous and very much traumatized due to the previous blind effort to extract. The pin was so tightly drawn into the bone, with the point upward, that great effort was required to dislodge it. In trying to dislodge it the pin was broken half in two and the head part was brought up with forceps. We finally secured the point. The patient was kept in bed on liquid diet for a few days. Some nausea persisted for a time but she made a perfect recovery.

Case IV. A child two years old who had swallowed an open safety-pin nine months prior to examination. A history of a peribronchial abscess was given. The abscess embarrassed the respiration to such an extent that life was despaired of, when the abscess broke, giving relief to the breathing. Examination with an esophagoscope revealed an open safety-pin in the esophagus just below the cricoid cartilage and sticking into the posterior wall of the trachea. The pin was grasped with forceps and dislodged, then closed with a wire snare loop and delivered. Uneventful recovery.

Case V. A child nine months of age, referred by Doctor Tindall of Greensburg, Indiana, swallowed an open safety-pin. The mother in her frantic efforts to grasp the pin had forced it well down below the level of the clavicle. This was followed by spasms of coughing and dyspnea. The child was brought to St. Vincent's Hospital where esophageal examination was made, the pin located and closed with a wire loop, after which removal was without difficulty. The patient left the hospital the next day in good condition.

Case VI. A boy fourteen years of age, referred by Dr. Kenneth Jeffries of Indianapolis. While holding a pin in the mouth it was aspirated into the lung from a blow on the back by a boy friend. Spasms of choking and coughing followed at once and lasted for a couple of hours. The symptoms had subsided by the

following day, except a slight cough. An x-ray examination was made, showing the pin, point upward, in the small lower lobe bronchus close to the heart. Bronchoscopic examination was made under ether anesthesia, the instrument introduced through the mouth. The middle and lower lobe bronchi were explored in a fruitless effort to find the pin. There was no reaction or unpleasant results following the examination except the disappointment of both family and physician. After a week of quiet it was decided to make another attempt to find and remove the pin with the aid of the fluoroscope. The lower and middle lobe bronchi were again explored, but without success. Having failed in the second effort, we advised his parents to take him to Dr. Chevalier Jackson at once, which they did. After keeping the patient in bed for ten days Doctor Jackson succeeded in finding and removing the pin.

REMOVAL OF TEETH

Considering the number of people who pass through the hands of the dentists for work on the teeth, and the great number of teeth extracted under gas anesthesia, it is surprising how few accidents we have from aspiration of teeth or dental instruments. It is a fine tribute to the skill and carefulness of the dental profession. However, accidents will sometimes occur in the hands of the most skillful operators.

Case VII. Mrs. K. L.; aged 46. This case was referred to me by Dr. J. A. MacDonald. History: Patient had had no previous illness that could be recalled. A few days after having some teeth extracted under gas anesthesia she developed a cough with pain in the right side, and a temperature of 103 degrees. Doctor MacDonald was called and made a diagnosis of foreign body in the lower lobe of the right lung. She was sent to the Methodist Hospital where Doctor Beeler made an x-ray examination, revealing the cuspid portion of a pivot tooth in the right lower lobe bronchus. On July 3, 1920, at four P. M., bronscoscopic examination was made per oral under ether anesthesia. The right lower lobe bronchus was found filled with pneumonic exudate which was drawn off with a suction tube. After some exploration the tooth was found tightly imbedded in the swollen bronchus, the biting end of the tooth presenting. We succeeded in grasping the tooth with different kinds of forceps, but could not hold the grasp on the polished porcelain wedge tight enough to dislodge. The effort was most discouraging, being conscious all the time that the life of our patient depended on the success of the operation. Realizing that a forcep could not be made to hold, and that it was not safe to prolong the effort, we decided to wait until the following day, July 4th. In the meantime a blunt hook was made, with the hope of turning the tooth so that the pivot could be grasped. The patient showed no bad results from the first attempt at removal, so ether was again administered on July 4th, the tubes were cleared of exudate and the body located, aided by the fluoroscope in the hands of Doctor Beeler. The swollen tube was contracted with applications of adrenalin and we then succeeded in passing the hook to one side of the tooth, engaging the pivot and turning the tooth so that the pivot end could be grasped with forceps. Delivery was then easy. Convalescence began at once and ended in complete recovery.

Tooth plates, especially partial plates with prongs, have the unpleasant distinction, according to Mosher, of being the most difficult foreign bodies which the physician is called upon to remove from the esophagus. We have had two occasions to verify this statement.

Case VIII. A patient was referred to me from near Wabash, Indiana, a man 38 years of age, who had swallowed a poor-fitting tooth plate holding three incisor teeth. The plate lodged at first just beyond the cricoid cartilage, causing great pain and dyspnea. Efforts were made by the local physicians to force the plate into the stomach, using bougies and probangs. They succeeded in forcing it down through the esophagus close to the cardiac orifice of the stomach, where it remained for three months. The patient, unable to eat solid food, consulted a specialist in Lafayette, Indiana, who tried again to force the plate into the stomach. The patient said he was assured that the effort was successful and that he could eat solid food. After two meals of solid food he suffered great discomfort and difficulty in breathing. He then had an x-ray made which showed the location of the plate in the distended esophagus. An esophagoscope was introduced under ether anesthesia. A mass of partially decomposed food was removed and the tooth plate found embedded in the esophageal folds just above the cardiac orifice. The three incisor teeth attached to the plate was the only part visible. There was marked edema and inflammation throughout the lower third of the esophagus. An effort was made by grasping the teeth with ordinary forceps to dislodge the imbedded plate, but the instrument was found too delicate. However, we finally succeeded in delivering the plate intact with a flexible forcep which had been purchased in the pre-esophagoscope days.

Mosher has devised an instrument for cutting a tooth plate, but this would not have been practical as the plate had become so thoroughly embedded. An application of silver nitrate was made to the ulcerated surface and the patient

fed hot milk until all inflammation had subsided. The last time the patient was seen he was in good condition.

NON-OPAQUE FOREIGN BODIES:

In children the most frequent and fatal forms of foreign bodies which find lodgement in the food and air passages are the various kinds of grains and nuts, such as corn, beans, peanuts, etc. Such substances are more likely to be followed by immediate death, or later develop violent inflammatory reaction than the inorganic substances. The roasted peanut is peculiarly irritating and usually produces a train of symptoms of its own known as "peanut bronchitis". The x-ray and fluroscope do not give us aid in locating this class of foreign bodies which they afford in the opaque form, yet they are often invaluable in determining the pathology resulting and should always be used if the time can be taken. The history we get in these cases is often vague, but physical examination by a physician of experience will often determine the presence of the foreign body. By carful study of the physical signs it can be determined what portions of the lung are being deprived of air and drainage and from this the almost exact location of the foreign body can be deduced. The bronchoscopist should always study these cases with the man in general medicine and the roentgenologist if he hopes to serve his patient best, at the same time gaining some knowledge of these cases.

Case IX. Referred by Doctor Harris of Bloomington, Indiana. A boy five years of age while feeding chickens aspirated a grain of corn into the trachea. Doctor Harris was called at once and finding the child in spasms, with coughing and dyspnea, he immediately brought the child to the Methodist Hospital. Everything was ready when the patient arrived. Careful ether anesthesia was given, a bronchoscope introduced per oral and a large grain of corn found lodged in the right lower lobe bronchus. It was grasped with forceps and brought up to the glottis with the 'scope. In an effort to bring it through the glottis a spasm was caused which seemed to be fatal. A quick tracheotomy was done and the grain of corn removed. Artificial respiration restored normal breathing after considerable effort and the patient recovered after a few days in the hospital.

Case X. Is almost exactly similar to the last. A grain of corn aspirated by a child five years of age while playing with corn. Doctor Tyndall of Shelbyville was called at once and finding the patient with frequent spasms of coughing and cyanotic, took him in his car and made a hurried trip to the Long Hospital in this city, after notifying my office by long distance. When the patient arrived he was so cyanotic that anesthesia was unnecessary. With the bronchoscope the grain of corn was found in the right middle lobe bronchus. Just as we were about to deliver it one of the physicians present, in his desire to see it brought out, kicked over the battery, breaking the electric connections and leaving us in the dark. When the lights were turned on in the operating room our patient was apparently dead. A stab tracheotomy was done and with artificial respiration the patient was restored. It is unnecessary to state that this case caused us a few anxious and dramatic moments.

Case XI. A boy four years old, referred by Doctor Little, was seized with spasms of coughing and choking while at play. The symptoms became so alarming that Doctor Little was called. He suspected a foreign body and possibly a grain of corn, as the child had been playing in a corn field. The patient was brought to the Methodist Hospital. Physical examination of the chest clearly indicated a foreign body, probably on the left side. Characteristic symptoms of wheezing respiration, dyspnea and coughing were present in a marked degree, with a temperature of 101 degrees. A bronchoscope examination was made per oral lasting twenty minutes without being able to locate the foreign body. After a few days' quiet in bed an x-ray examination was made by Doctor Beeler and the report said, "There is a shadow on the left side which is rather suspicious, but not positive." On the second bronchoscopic examination we found the left lower lobe bronchus swollen and partially filled with exudate. After clearing the tube, a flat white grain of corn was found adhering close to the mucosa. It was removed through the 'scope, the operation requiring ten minutes. The lung cleared up in a few days.

Case XII. A boy fourteen years of age, the patient of Doctors Stayton and MacDonald. Doctor MacDonald had obtained a vague history of the aspiration of a peanut. This child was so ill that we had some hesitancy in making a bronchoscopic examination at the time—temperature 104½ degrees and pulse 140. The pleural cavity had been aspirated for pus. A bronchoscopic examination was made, however, as the discovery of a foreign body seemed the only hope. The right lower lobe bronchus was found inflamed and full of exudate. After clearing the tube by suction and sponging, one of the smaller bronchi was found to be filled with what seemed to be a portion of a peanut kernel. On removing it with forceps the abscess broke, filling the bronchoscope with pus. After a quantity of pus was coughed out the patient's breathing became better. This was followed by a rapid fall of temperature and pulse and gradual recovery took place.

Case XIII. A child aged eleven months was referred from near Frankfort, Indiana, with the statement that a bean had been aspirated the day before. The child's breathing was labored and its appearance cyanotic. An x-ray was made by Doctor Beeler at once. The body being non-opaque, the x-ray did not show its location. Bronchoscopic examination under light ether anesthesia revealed the bean in the right middle lobe bronchus. It was embedded so tightly in the irritated tube that we could not dislodge it with any forceps at our command at that time. A tracheotomy was done and a tube put in, hoping we might have another chance, but the child died that night from dyspnea.

Case XIV. A penny removed from the esophagus of a child three years old. Nothing unusual in the case.

Case XV. A child six months of age swallowed a twig of a Christmas tree. This was removed from the middle third of the esophagus through the esophagoscope.

THE PHYSICIAN

"THOU SHALT NOT KILL"*

BY FRANK B. WYNN
INDIANAPOLIS, INDIANA

At first thought the commandment which is the title of this essay would seem to be wholly inapplicable to practitioners of medicine. Yet even the most cursory study of their professional conduct will reveal many who are innocently, ignorantly or even criminally responsible for the loss of life. These sins are more often negative than positive. Professional ignorance, carelessness or selfishness does not absolve one from responsibility in the performance of duty. Since the care of life is placed upon our shoulders, this imposes the most serious obligation to bring to bear all the agencies within our power for the relief or cure of the patient. Critical observation impresses one that even good men, measured by the ordinary standards of conduct, fail to comprehend the gravity of this responsibility.

First, how often are we guilty of negative sin in public health matters—carelessness or oversight in reporting contagious and infectious diseases. The management of almost every case of infection, acute or chronic, carries with it the personal obligation of the physician to put out the warning signal—to give always without money and without price the instructive knowledge which will prevent further extension of the disorder. What fearful responsibility rests upon us too, as possible carriers of infection. In this vast altruistic program let us not be discouraged by the indifferent attitude of the public so quick to question the wisdom or sincerity of our action. We should rather with unabated fervor continue our support of all public health movements. To do less would constitute contributary negligence in the taking of life.

Vaccine treatment (and its kind) constitutes the dominant therapeutic fashion of the day. The innumerable biologic products of the great pharmaceutic houses, with their enticing and suggestive literature, often lead the unwary astray. Novices who do not fully understand the conditions warranting such treatment rush to its use with innocent enthusiasm but in ignorance of its dangers. One should remember that the injection of a foreign protein into the body is always a serious matter. Future medical history will undoubtedly record that through the cupidity of commercial houses, members of the medical profession have often been led astray in this matter of vaccine administration. Aside from the serious harm and danger to life arising from their improper use, it is humiliating to the good name of medicine to have been duped by a grasping commercialism.

In no phase of medical practice are the sins of omission so common as in the realm of diagnosis. It is a natural error and there are mitigating circumstances oftentimes. The busy practitioner especially is likely to fall into the habit of drawing hasty conclusions from subjective phenomena. A patient comes with a ready-made diagnosis, only asking for a prescription. It is polite and so easy to follow his lead and prescribe a symptomatic remedy. For headache bromides may be given only to find a few hours later uremic convulsions, which might have been warded off by proper measures at the right time. Or pain in the epigastric area or right lower quadrant is permited to go with a prescription for "biliousness" or "intestinal indigestion". Golden hours are frittered away when prompt surgery might relieve with success a condition which later becomes hopeless. Not less culpable is the case diagnosed as appendicitis and operated immediately, when the day following reveals the essential condition to be right sided pneumonia with reflex abdominal pain. Or what sin of omission is more common than prescribing a cough sedative to a person with an acute "cold" giving assurance that prompt recovery will take place. A month later the patient returns running temperature elevation and having well marked signs of acute pulmonary tuberculosis. Again, surgical experience and pathology have long since proved incipient cancer curable by radical measures. Yet how common is procrastination until metastases proclaim the doom of the patient. The disposition we all acquire with maturing experience and years to place greater faith in nature's capacity to combat disease should never find justification in the treatment of cancer.

*Fifteenth of the series of articles by Dr. Wynn appearing regularly in THE JOURNAL.

When and *when not to operate* are questions which perplex both special and general men. Honest differences of opinion prevail. Inexcusable procrastination on the one hand and presumptious radicalism on the other are unseemly and often disastrous to the interests of the patient. A few well established standards have been worked out, disregard of which is apt to be followed by serious or fatal results. In some surgical conditions temporizing is a sin just as in others delay is a virtue. In fulminant appendicitis immediate surgical attack is the proper procedure; but in acute gall-bladder disease cautious delay and later operation will generally enhance the patient's prospects of life. Procrastinating in cases of chronically infected tonsils giving a history of rheumatic and neuritic attacks, is just as inexcusable as to radically invade tonsilar tissue when there is constitutional and local evidence of acute infection. Operation in the latter case is very apt to pour virulent septic and toxic material into the blood and lymph streams, often followed by acute pulmonary, renal or cardiac involvement of grave significance. Even a minor operation like the wholesale extraction of teeth which are pyorrheal is sometimes followed by local organic implantation. Hence in these cases it is rarely advisable to extend the extraction over two or three sittings.

In other cases where multiple foci of infection exist it often requires large self-control and moral force on the part of the surgeon to abstain from wholesale ablation of pathologic lesions, remote from each other. Patients themselves insist upon having the whole field cleared at a single operative attack. Under such circumstances the operator should always lay close to his conscience the fact that every additional focus of infection attacked surgically adds greater shock and larger possibilities of spreading infection. In practice one often observes in one surgical procedure, operation upon the appendix and the female adenexia. The propinquity of parts makes this feasible. On the other hand the simultaneous attack upon septic foci remote from each other—say the gall-bladder and tonsils—subjects the patient to infinitely greater risks. It is a species of gambling with the protective forces of the body which good surgical judgment will seldom tolerate. Instead of such surgical adventure it were wiser to be less brilliant and exhibit keener conscience for the saving of life.

The chief topic of discussion in this essay is that of criminal abortion. This crime has existed in all ages. It has been more prevalent in civilized countries than among primitive races. Even in our own land it has been a matter of frequent observation that the families of our grand parents were larger than in our own day—partly due to their physical sturdiness, partly because less given to the modern sin of preventing conception, and most of all from the fact that the public conscience was keenly opposed to the interruption of the course of gestation. What are the underlying factors which have brought about this change of attitude toward begetting and bearing children and home-building?

The rapidly increasing urban population constitutes the chief foundation stone of this crime. The artificial life which it begets makes children inconvenient. Among the leisure class where childbearing should be prolific, the feminine patrons of luxury and comfort give way to the spell of indolence and selfishness. The consuming thought is not how they may become the matrons of large and healthy families but how they may avoid these physiologic triumphs and substitute the ennervating social life with its irregularities and excesses.

And since this is the goal toward which the extravagances and fashions of the age point, the young man of moderate means hesitates to face the responsibilities of marriage. Or should he do so he is driven by the fear of large social demands and the financial burden of maintaining a large family, into accepting and practicing the common sex sins of preventing conception or resorting to abortion.

Near akin to the social errors of the day in feeding these vicious practices is the restless spirit of the age—the morbid craving for sensational excitement, quite inconsistent with the practice of domestic virtues. To be reckoned with also is the habitation question. Modern apartments have rapidly usurped the place of the cottage and home. Apartments are not suited for the rearing of children; and furthermore the little ones are not wanted. So does commercialism join hands with vicious social and sex-life in the promotion of abortion.

That public sentiment has become tolerant of the practice of abortion is borne out in the experience of every general practitioner. As the newly married couple enters the private consultation room, one hopes that they have come to express joy over conception and the prospect of parenthood. But not so. Their whole demeanor is apologetic. A flimsy array of excuses is offered why she should be "brought around"—her friends will make sport of her for having a baby so soon; it will interfere with numerous social engagements; she is not strong, etc., etc.

In listening to such narratives it was always difficult for me to repress indignation. What is particularly irritating is that they so often assume an air of confidence that the doctor will yield to their importunities. Curiously it does not seem to occur to them that they are asking the physician to engage in a criminal act; and that on their own part they are guilty of murderous intent based upon the most sordid selfishness.

Here is one of the most difficult and delicate questions which the general practitioner must face. It is not merely a question of ethics to the physician—it is a problem of vital concern to the morals of the community, the health and happiness of the citizenship and the growth and stability of the State. The practice is undermining the very foundation of our national life—the home. Legislation will not correct the immoral tendency. The law never has been able to make substantial progress in bringing professional abortionists to a reckoning. Larger reform will result from the profession seeking to purify the fountainhead of this vile stream. It is for us in public and in private to show on the one hand the physiological wrong and the grave dangers of such practices; and on the other to hold up the ideals and rewards of the home with children to make secure the marital union—bringing new burdens it is true, but greater rewards in the end. It is for us to make plain that the violation of the physiologic law is not merely a crime. It brings upon its perpetrators a restless and unsatisfied life. It is the opening of a Pandora box of evil spirits, spreading disaster in the household—selfishness, cynicism, sex-suspicion. As the sexual fires burn low, marital infelicity flames high. The victims pass down life's journey without children or grand-children to lighten their burdens or brighten the pathway. Some have the wisdom to try to retrieve their moral losses by adopting children—an experiment which generally yields splendid results.

Here then is laid upon the profession a tremendous responsibility. Who is in a position to render such valuable service for the physiological and social good of the race? Is there not deep need of a quickening of the medical conscience upon this question?

I cannot better close this appeal than by quoting as best I can from memory an experience of early student days. It was in the office of a "Practitioner of the Old School" where I did a little study and learned more in practical wisdom. One day we noticed approaching a young man and his wife—only recently married. They belonged to the so-called aristocratic society of the little city. The doctor (blessed be his memory!) divined the mission of the young couple. Turning to me he said: "You take a seat in the apothecary shop, leaving the door ajar into my consultation room. Then listen with both ears how I handle this situation."

After ushering them into his private office the young bride opened the conversation. "Doctor, it is two months since we were married. I have not menstruated and have the most intense aversion for food. Here I am with any number of social obligations, an elaborate trousseau, and should be having the time of my life, but I get no pleasure out of these things. We were planning a trip west next month but I do not feel like going. You know I have not been well for a year or two. Mother is terribly worried and says if I should be in a family way it would wreck my health."

She paused a moment which gave the doctor a chance to shift the current of thought which he did in this deft manner: "As I recall it, Catherine, you are now past twenty. You know I was present at your first birthday celebration and gave you your first spanking. It was a great occasion. You stirred up a terrible commotion. One time I thought you done for—blue around the 'gills' and no sign of breath! I poured cold water down your spine. You thought that an outrage and yelled like an Indian. It was a close call. You've been a lot of trouble to your folks all these years but I guess they think you worth it. Aren't you glad your mother didn't do anything to interfere with Nature's course seven months before you were born? If she had, it would have been wrong and you would not be here this minute.

"By the way, had you noticed in the morning paper that the Lambreths have separated and she is suing for divorce? What a pathetic situation! They have proud family names, wealth and social position but their union has proved a failure. Why? They started wrong. They bowed before the shrine of 'high life', worshiping the idols of selfishness, luxury and ease. They did not want children who would interfere with their indulgences. After a few years' pursuit of these things she yielded to maternal yearning for parenthood, but Nature so often balked, refused to bear fruit. Note now, the melancholy train of her physical misfortunes: Measures to prevent conception; criminal interruption of the course of pregnancy; diseases of the female organs secondary to these practices; repeated surgical operations without relief; chronic invalidism; peevishness, melancholia and sex-suspicion. There has been the development on his part of cantankerousness, cynicism, and sex-wandering. And now the climax has been reached in this divorce proceeding. My young friends, what is the thing which would have spared these unhappy people this sad fate? Children would have welded their lives into a holy union, with exalted purposes and aims. I have not the wealth of the Lambreths but I am the proud possessor of three precious gems: Ruby with her pink skin, puckering dimples and roguish chatter; Opal with her iridescent temperament as changeable as sunshine and showers in April; and Pearl, the gem of quiet steadfastness and purity! Ah, what a joy to our lives are these three children. From sleepless nights, uncollected accounts and harrassing cases I come home grouchy.

Things are not helped by my wife being irritable over domestic routine and telephone annoyances. And so we cross swords in a little family spat, but how quickly it is all forgotten and forgiven in the joy we find in our children. They make life as it runs on worth living. And so I look forward to you young people getting the same happiness out of the bearing and rearing of children that we have done." Rising to depart Catherine said: "Doctor, we will follow happily what you have advised."

The interesting sequel to this interview came three years later. They were again in the physician's private office, leading a beautiful, little boy. With heart palpitating and tears streaming down her face the young mother pointed to the lad saying: "Oh, doctor! Suppose we had carried out our selfish, carnal impulses!"

NEEDLE IN ABDOMEN SIMULATING TUBERCULOSIS OF THE HIP

ARTHUR A. RANG, M.D.
WASHINGTON, INDIANA

There are a great number of cases reported where pins, needles or fragments of needles have been found in various parts of the body, or have made their appearance under or through the skin in many different localities. Many of these reports are offered by the laity, the foreign body having been removed without surgical assistance, and often the mode of entrance is undetermined.

The following case is presented because of the peculiar history, the gravity of the situation developed, in contrast to that usually resulting from a needle being present in the tissues, and the very interesting diagnostic features developed.

M. G., age 12 years, was presented for treatment of a fistula opening over Pouparts' ligament, midway between the anterior superior spine of the ileum and the pubis, with the following history:

Family record negative, except her paternal grandfather, who had tuberculosis. In August, 1913, she complained of a sudden pain in the lower right quadrant of the abdomen, which seemed deep and in the region of the appendix. The pain increased in severity and she walked with a limp, on the toes of her right foot. The family physician was called and made a diagnosis of appendicitis, which was concurred in by a consultant, and an operation was advised. This was refused by the parents and the girl was removed to a sanitarium in another city, where the case was treated expectantly. During her stay in the sanitarium she ran a continuous temperature and had night sweats. Her right leg was drawn up on her abdomen and remained so for two weeks, after which it gradually straightened out, but she was unable to walk on it without a limp for several months. She suffered considerable pain in her right hip, became emaciated and showed very little improvement until February, 1914, when an abscess pointed and evacuated itself over the crest of the right ileum, and immediately the pain and soreness in the hip began to subside. This drainage persisted for several weeks and then closed, opening a short time later with the sinus over Pouparts' ligament, which has continuously drained since then. Her weight increased and her general health greatly improved.

In the last six years she has been treated by different doctors with different diagnoses, mostly built up on a tubercular hypothesis. Among these were tuberculosis of the hip, and tuberculosis of the spine with a psoas abscess, both of which were possible with the symptoms complained of by the patient and objective symptoms presented. Without a radiogram neither diagnosis could be disproved.

In my first consideration of the case, I was impressed with the idea that the original condition must have been appendicitis, or an abscess in the territory closely associated with the appendix, and this idea was strengthened by my respect for the judgment of the physician who first saw her and made the diagnosis of appendicitis. To determine the extent, size and origin of the fistula, and the condition of the bony structures under suspicion, the fistula was injected with bismuth paste and the patient radiographed. The result was a distinct surprise, as the radiogram showed what was apparently a pin with a large head, located within the abdominal cavity near the normal location of the appendix. Two weeks later this foreign body was removed at operation and proved to be a needle, minus the eye, heavily coated on one end with concretions, which gave it the appearance in the picture of having a head. It was thoroughly embedded in a mass of scar tissue within the abdominal cavity. Following the operation a slight fecal fistula developed and continued intermittently for three months and then closed permanently.

With the history of her initial attack, with the fact that all of her bony structures appear normal in the radiograms, and with the advent of the fecal fistula on opening the external aspect of the scar mass, it seems safe to presume that this needle gained entrance through the gastrointestinal tract, to have perforated the intestine in the region of the appendix, and to have formed an abscess simulating a true attack of appendicitis, afterwards becoming enclosed in the scar mass resulting from the abscess and becoming heavily coated with concretions.

In this case, again, the importance of a radiogram in obscure conditions, and the very helpful information to be derived therefrom, is emphasized, and in this particular instance was absolutely essential for a diagnosis.

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EDITORIALS

THE SCHICK TEST AND THE ADMINISTRATION OF TOXIN-ANTITOXIN FOR THE PREVENTION OF DIPHTHERIA

While the last twenty-five years have witnessed a reduction in the mortality from diphtheria, largely as a result of the prompt and sufficient administration of antitoxin, a reduction of from 150 per 100,000 of the population to 21 per 100,000 of the population, it is apparent, as stated by the Bulletin of the Department of Health of New York City, from which we quote, that we have almost approached the control of the cases of this disease by the old method of disinfection and antitoxin administration. As the statistics of the last decade show, there has been practically no reduction in the morbidity of diphtheria. The limitation of control is due to the fact that many susceptible individuals contract diphtheria not by exposure to cases ill with or convalescent from the disease, but from carriers or persons in apparent health who harbor diphtheria bacilli in their throats or noses. It is well known that a large percentage of diphtheria cases have not been in contact with known cases of the disease. Furthermore, many mild cases of diphtheria, presenting evidence of only reddened throat or tonsillar exudate, as well as many cases of well marked diphtheria, are unrecognized and untreated. These cases contribute in no small way to the infection of susceptibles. Therefore, a still further control of diphtheria depends upon the determination of which individuals are susceptible and then to render them immune, for in spite of all rules and regulations of reported quarantine, educational propaganda, administration of antitoxin, school medical inspection, improved hygiene and sanitation, there still remains the inability to isolate and control carriers in these cases. As a result of numerous laboratory experiments and clinical observations it has been established that the Schick test provides a simple, convenient and reliable means for determining the susceptibility or immunity of individuals to diphtheria, and that the administration of three doses of toxin-antitoxin, given one week apart to susceptibles, will protect the vast majority of them—90 percent or more—against diphtheria, perhaps even during their lifetime. The Schick test and the administration of toxin-antitoxin offers such great possibilities, that the Indiana State Board of Health proposes that all children entering school for the first time be immunized at once. Children entering boarding schools or homes for children also should have the Schick test made, and be immunized if susceptible. The material for the Schick test may be obtained from the large biological supply houses, the technique is simple, and the reactions are dependable if carefully controlled. The toxin-antitoxin preparation for immunization purposes also is sold in packages for use and is inexpensive. Comprehensive information concerning the subject will be furnished on request by the Indiana State Board of Health.

DR. HUGH CABOT'S MEDICAL SOCIALISTIC SCHEMES FOR MICHIGAN

If anyone thinks that we are borrowing trouble when we talk about the possibilities of State Medicine and the evils resulting therefrom, let him digest the statement made by Dr. Hugh Cabot, the new dean of the Medical Department of the University of Michigan, who is quoted in the daily papers as having said, "The limitations of the services of the University Hospital to the indigent people of the state to my mind is undemocratic. The hospital should be open to rich and poor alike."

We all know that the hospitals of the University of Michigan have been pauperizing the community, not only in Michigan but in sections of Indiana and Ohio, by furnishing gratuitous medical and surgical treatment to any who applied, whether able to pay for such services or not. Even if the authorities of the University of Michigan considered that the taxpayers of Michigan were entitled to gratuitous medical and surgical services because of the taxes paid to support the institution, it is inconsistent to consider that people residing outside of Michigan, who pay no taxes to the support of the institution, should be accorded like privileges. However, the system is wholly wrong and in the end is bound to end disastrously. There is no reason why the rich or well-to-do people of Michigan should not pay for their medical and surgical services just as well as to pay for their plumbing or for any other services rendered them. If the state is going to furnish gratuitous medical and surgical services to the rich, then why not furnish them other necessities, or for that matter with automobiles or other luxuries enjoyed by the rich. We notice that most of the advocates of this pernicious form of State Medicine are safely entrenched in a soft berth for themselves, and Dr. Hugh Cabot, perhaps not being really obliged to practice medicine as a vocation, is very fortunate in being

at the head of a great University which pays him a salary that amply provides a comfortable living for him, but what about the struggling doctors, perhaps graduates of the Medical Department of the University of Michigan, who are depending upon the public for support, but who must compete with their *alma mater*, and, worst of all, an *alma mater* that donates its services to rich and poor alike? The time and money expended in securing a medical education means nothing and brings nothing unless its possessor can fall into a soft berth provided by federal, state or municipal support.

However, aside from all this discussion of the economic phase of the situation as it affects doctors, there is a far more important matter for consideration and that is the one of the limitations of the individual effort. It is quite possible that a few men occupying soft berths may continue to progress, but for the vast majority there is little initiative and in the main patients are going to fall into the hoppers of institutions that treat them in a rather impersonal and machine-like way, often-times with mediocre services. Aside from this there will be the ever present political phase of the scheme to be dealt with, and experience shows that those selected for federal, state and municipal positions are not always those who are best qualified, but those who, for one reason or another, are able to control the most influence. We have no quarrel with those who see fit to furnish free medical and surgical attention to the worthy poor, for that practice is upheld and followed by every member of the medical profession, but the scheme proposed by Dr. Hugh Cabot is unworthy of acceptance as being the best for the institution of which he is dean nor is it the best for the people of the state. For the medical profession it eventually will prove annihilation, as private practice, except in a few isolated instances, cannot exist in the face of that sort of competition.

It strikes us that Michigan has been flirting with several socialistic features, and the Medical Department of the University of Michigan long has been a thorn in the flesh of the medical profession of the state through its tendency to socialize the practice of medicine. Now comes Dr. Hugh Cabot, resplendent with the glamour of a reputation secured in the literary, aristocratic and esthetic atmosphere of Harvard University, with revolutionary and bolsheviki notions which, as dean of the Medical Department of the University of Michigan, he expects to thrust upon the people of Michigan, whether they want them or not. Perhaps a certain element among the people in Michigan will shout their approval, but what about the members of the medical profession whose throats are being cut in order to furnish greater reputation and power for men like Dr. Cabot? And what about the people who in the end will be the greatest sufferers from such an impracticable scheme? As we have said before, if we are going into this socialistic business, why not socialize everything, like they do in Russia, and get the agony of the experience over at once in order to get back to the sane conduct of affairs at an earlier date? It is as fair to put all vocations under state control as it is to put the medical profession there.

This whole question of state medicine reminds us of what we have said before, and that is that the medical profession has more to fear from members in its own ranks, men who have been placed in high positions very largely through the efforts of their fellow professional men, who are really the worst offenders in advocating and supporting some of the wild, impractical and socialistic schemes which have as their ultimate end the annihilation of private medical practice. It is time to have an accounting and separate the sheep from the goats. We may have a very high regard for Dr. Hugh Cabot's ability, but we have only condemnation and censure for him in advocating such schemes as he proposes in Michigan, and the quicker the medical profession places its stamp of disapproval upon him when he continues to advocate such socialistic schemes as the one which forms the basis of this discussion, the better it will be for the medical profession in Michigan.

CANCER CONTROL

Ninety thousand people in the United States die of cancer every year. With the present state of medical knowledge it is considered possible, by those in a position to know, to cut this death rate in half. This would mean the saving of forty-five thousand lives annually. A large proportion of these deaths are due to the fact that cancer is not recognized early. The chief reason why cancer is not usually recognized early is because the people generally are ignorant of the way cancer begins, and therefore do not consult a physician as a rule until the cancer is well advanced. Another reason why so many cancers fail of recognition early is, we regret to say, due to a lack of knowledge or appreciation on the part of some doctors of the early signs of cancer and precancerous conditions. All too often the surgeon has patients referred to him only after weeks or months of "observation", and sometimes "treatment".

The early diagnosis of cancer is not easy, but is possible in a large proportion of all cases, and in all cases save those involving internal organs. All cases of suspected cancer should be promptly subjected to a thorough examination. However, as previously indicated, the

chief reason for the high death rate from cancer lies in the ignorance of the people, and it was largely for the purpose of overcoming or reducing this ignorance that the American Society for the Control of Cancer was organized. In the dissemination of necessary knowledge to the public, this organization is using all available channels, including the lay press, clubs, moving pictures, etc., and medical societies are urged to hold meetings from time to time to which the public is invited, at which the subject of cancer is presented in a proper popular way. The society will also furnish speakers for professional meetings for the purpose of assisting in bringing the latest knowledge of malignant disease to the attention of the general practitioner. Mrs. A. J. Detzer, 910 West Wayne Street, Fort Wayne, Indiana, is the secretary of this society for Indiana. Mrs. Detzer will, upon request, supply speakers and literature for clubs and medical societies throughout the state. Women's clubs should be especially interested in this matter, for cancer is much more (about 2 to 1) frequent in women than in men. It is not perhaps generally known that among people over 40 years of age cancer causes more deaths than tuberculosis or pneumonia.

The American Society for the Control of Cancer will conduct a cancer campaign throughout the United States from October 30th to Nov. 5th. We urge every doctor and every medical organization in this state to actively support this movement. The good resulting from the campaign will depend largely upon the degree of public interest aroused, and this will depend upon the activity and interest displayed by the profession. The aim is to reach every community with the cancer message during "Cancer Week", and we urge doctors throughout the state to see to it that their particular community gets this message. A letter addressed to Mrs. A. J. Detzer, Fort Wayne, Indiana, will bring any information desired.

One death in every ten after the age of 40 in this country is due to cancer. If every doctor does his duty this death rate can be reduced one-half.

STATE MEDICINE

Henry Ford of "flivver" fame may be visionary in some things, the reputation having been gained largely through his spectacular efforts to secure peace during a dark period of the world war, but in many ways he has shown himself to be the possessor of ideas that are fundamentally sound and worthy of thoughtful consideration by the public at large. This is evidenced by his opposition to public ownership of utilities, his expression of opinion concerning the management of large commercial interests, and quite recently his opinion concerning the subject of State Medicine, which has appeared as an editorial in his international weekly, *The Dearborn Independent*. While Mr. Ford may not have been the writer of the editorial, he certainly sanctioned its appearance in his weekly, and it is so pertinent to the subject that we herewith reproduce it:

State ownership and control is perfectly sound in theory, but has proved itself wholly unsound in practice. There may be countries in the world where it is safe to trust the control of vital interests to the group of men who comprise the government; it has not always been safe in this country, as years of experience prove. The revelations of official incompetency, and not so much incompetency as dishonesty, during the recent war period, will effectually modify any theoretical appeal which the idea of state control may have.

But that there are influences in this country which are bent on bringing all the people's affairs under official scrutiny, is most apparent from the efforts now being made to create a sentiment in favor of "state medicine". This means simply: more jobs, no privacy, curtailment of freedom, the destruction of the medical profession by the discouragement of research work, and the coarsening of delicate intimacies. It means practically that what the United States Shipping Board did to the shipping situation of the country, "state medicine" would be permitted to do to the people's health.

The most astonishing feature of this propaganda is the assumption that the proposal *could* be made attractive to the American people. Most cities have city physicians now, and most counties have county physicians, and no one rests under any doubt of the quality of the services rendered. The public has had a wide experience in going to its officials for sufficient water, heat, light, school facilities and transportation service, and sufficient difficulty in getting any kind of service at all at any reasonable tax rate, to prevent its falling in love with the idea of going to its officials for a medicine when it is sick. Practically, it will not work; the genius of the American people is against it.

Between family physicians and families there is a confidential relation which rests on choice and experience. It is not official. It is not altogether professional. It partakes of the confessional in large degree, and constitutes a friendly pact based on the experience of many fights with disease and death. So well recognized is this that the family physician has become a fixed figure in our lives, and with results of undoubted good, as the records generally show.

To change all this and establish a police health station, as it were, at which citizens must apply for medical aid and await the pleasure of an official doctor who is paid anyway, and whose professional career does not depend on the confidence he is able to evoke by skilled and loyal service, is to suggest something which is so alien to our Americanism as almost to prove an alien course and an alien purpose.

With the growing predilection of a certain group for medicine and surgery, and with that group's constant predilection for securing control of the intimate sources of the people's confidence and strength, there is no doubt whatever as to what complexion "state medicine" would take if it were adopted.

These are times when more than at any previous period the American people must be on guard against *ideas* that are not American. The time has come

for the exercise of a wholesome defensive suspicion about many things that outwardly are made to appear desirable, but inwardly conceal dangers to our fundamental traditions and liberty. And we are never more justified in our suspicions of alien influences for an alien purpose than when we see attempts made to "regiment" the American people or their private affairs.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

DON'T gamble too much on the firm that is forever prating about its "quality of service". It is a good deal like tying up to a man who tells everybody how honest he is when, as a matter of fact, it is a good plan to hold on to your pocketbook when you are around him.

DR. WILLIAM R. DAVIDSON, of Evansville, the incoming president of the Indiana State Medical Association, has long been identified with the activities of the Association, and well deserves the honor that has been conferred upon him. The Association has honored itself in honoring him.

THE Christian Scientists claim that Christian Science healing is not medical practice. We admit it. In most instances it approaches fraud, and in a few instances it is criminal if used to supplant rational and tested procedures for saving life when threatened by serious diseased conditions.

ON the first of September, according to the government report, diphtheria was unusually prevalent in Indiana, the number of cases being more than twice as many as those of scarlet fever or typhoid fever. This leads us to inquire as to why the Schick test and preventive doses of toxin-antitoxin are not more generally employed.

WITH the beginning of the public schools the time has arrived for determining the susceptibility to diphtheria by employing the Schick test and immunizing children by the administration of toxin-antitoxin mixture. It would be well for physicians and public health officials to take the trouble to acquaint parents with the value of this procedure.

THE attention of readers of THE JOURNAL is called to an open location for the practice of medicine at Hemlock, Howard County, Indiana, which is left vacant by the death of Dr. L. DeWees. The town is located in a good farming community and there is no competition nearer than five miles. The office, drugs, instruments, etc., of the late Dr. DeWees are all in good condition, and definite information concerning the practice may be secured by addressing Mrs. L. DeWees, Hemlock, Indiana.

THE Indianapolis Session of the Indiana State Medical Association may be counted as one of the best ever held. There was an attendance of between five and six hundred. The papers and discussions were better than last year, and the social features were all that could be desired. The occasion was more interesting as a result of the visit of Surgeon General Ireland, a native of Indiana, who delivered the principal address at the banquet. Dr. William R. Davidson, of Evansville, was the unanimously chosen president for the ensuing year, and Muncie will be the place for the 1922 session.

MEMBERS of the medical profession can show in no better way their appreciation of any efforts on the part of the lay publications to uphold and advance scientific medicine than by subscribing to the *Woman's Home Companion* which recently has been boycotted by the antivivisectionists because of its stand in favor of animal experimentation when properly regulated. It may be possible that the *Woman's Home Companion* offers little of interest to the average doctor, yet he can place it upon his reception room table where it probably will prove interesting reading to the feminine members of his clientele.

THE osteopaths are doing a lot of newspaper advertising in an endeavor to show the public what they can accomplish by practicing their peculiar ideas. The latest thing is a brochure on the osteopathic treatment of eye, ear, nose and throat diseases. Among interesting claims put forth are those relative to the osteopathic cure of enlarged tonsils, adenoid tissue in the nasopharynx, hay fever, deafness, cross eyes, running ears, and some other affections that we know to be successfully relieved only by the application of surgery or some treatment aside from mechanical manipulations. However, it is a safe bet that the newspaper advertising will bring a lot of suckers to the net.

THE Riley Memorial Children's Hospital, to be erected in Indianapolis, is a most worthy enterprise and should have the support of the medical profession. At the Indianapolis session the Indiana State Medical Association offered its encouragement and support to the enterprise with the distinct understanding that the hospital is for the *indigent* children of the State of Indiana. We are under the impression that the addition of the word *indigent* to the endorsement of the project is thoroughly justified in this age when uplifters are offering all kinds of schemes for pauperizing the community by furnishing gratuitous medical and surgical attention to many who are not only able to pay for it but should do so.

STUDIES made by various observers definitely show that from one to three percent of all persons affected with typhoid fever become chronic typhoid carriers. These constitute a serious menace to public health and constantly threaten epidemics. To obviate the overlooking of carriers, the New York City Board of Health requires that, in addition to the two negative stools which are necessary before a case is discharged, every terminated case of typhoid fever shall be required to submit two additional stool specimens two months after termination of the case. It is thought that this additional safeguard eventually will bring to the notice of the Board of Health cases in which the discharge of typhoid bacilli from the intestines is intermittent. The plan adopted in New York City may with profit be adopted in other cities and towns throughout the country.

IT is no idle dream to look forward a few years when the medical profession will be socialized, unless something is done to stem the tide that insidiously is working in that direction. Already various socialistic and paternalistic schemes for control and supervision of the activities of the medical profession have been proposed, and in some states scarcely missed being put into operation, but the rank and file of the medical profession slumbers on content to say "why make a mountain out of a mole hill?" or "why cry 'wolf' when there is no animal in sight?" Our own idea is that it will take more than a charge of dynamite to awaken the medical profession from the lethargy it now seemingly enjoys, but the trouble of the awakening will be that it will put the profession into another sleep that will be deeper but far more troubled than the one that is being enjoyed at the present time.

OUR medical and surgical books with their illogical and ignorant teachings are now obsolete, for lo and behold, the chiropractors have discovered new theories as to the cause of disease. A leading chiropractor emits the following: "Goitre is caused by subluxations of the vertemeres, which produce pressure upon the nerves emitting from the adjacent foramina and brings about a pathological condition in which the function of expansion (cell growth, or cell multiplication) is affected; there being an excess of development of the cells to what is needed for the normal secretion of the thyroid fluid. That is, the new cells which are brought forward to replace the old, worn out or exhausted cells are being brought forth too rapidly, or before they are really needed."

"Just as clear as mud," and just as effective as antiphlogistine on the broken leg of a wooden Indian!

THE members of the medical profession, for the first time in their lives, are beginning to realize the necessity of being on guard to prevent the acceptance of various schemes proposed ostensibly for the benefit of the public good but in reality offering a means of socializing the practice of medicine. We have been lending our support to public health work of every description, and very justly so as long as the public health work has been conducted along the lines followed in years past. However, at the present moment there is a tendency on the part of many of the public health officials to so broaden the field of public health work as to make serious inroads into private medical practices and trample upon the toes of the doctors who depend upon their professional work for a living. In fact it was demonstrated at the Boston session of the A. M. A. that what we had most to fear in much of the so-called uplift work that is detrimental to the medical profession at large is the attitude of public health officials. They stood shoulder to shoulder for some actions on the part of the A. M. A. that would be not only economically detrimental to the medical profession at large, but in many instances would prove positively vicious. By all means let us be on our guard as to whom shall represent us in the House of Delegates at the A. M. A. sessions and who are to serve as officers of the parent organization. We have had quite enough of the Lambert stripe and satellites.

DR. GEORGE F. EDENHARTER, superintendent of the Central Indiana Hospital for the Insane, located at Indianapolis, announces the twenty-second annual course of clinical lectures in psycho-pathology and psychiatry, neurology and neuropathology. Dr. Max Bahr has charge of the course in psycho-pathology which is to be given during the first semester, from September 17 to January 14, and represents a series of

lectures with clinical demonstrations on the psychic elements and their derangements.

The instructors in the course in psychiatry, neurology and neuropathology are Drs. Max Bahr, Charles F. Neu and Charles D. Humes. This course is to be held during the second semester, from February 7 to May 23, and consists of the presentation and demonstration of pathologic specimens which show the pathology in the type of cases which are presented in the lectures following the demonstration. There also will be clinical conferences in the presentation of cases not scheduled by the regular lecture hour.

The hospital, with an enrollment of over fifteen hundred patients, a separate hospital for "sick insane" and a large and fully equipped pathologic laboratory with amphitheater for lectures and clinics, furnishes appropriate and abundant material for research and investigation and also affords an excellent opportunity for teaching the Science of Mental and Nervous Diseases, including their diagnosis, treatment and management. The lectures are free to practitioners and students of medicine. Further particulars may be secured by writing Dr. Geo. F. Edenharter, Indiana Central Hospital for Insane, Indianapolis, Indiana.

As an evidence of how easily the clergy is duped we have before us the advertising matter of two Indianapolis "cancer specialists" containing photographs and flattering endorsements from a number of members of the clergy. Aside from the fact that ministers of the gospel in general always have helped the progress of quackery and the sale of the most notorious humbugs in the line of proprietary medicines, a reason for the endorsement of this Indianapolis Cancer Hospital is found in a certificate which distinctly states "If you personally interest yourself in sending us one patient whom we accept as a patient at our Hospital we will immediately mail you twenty-five dollars for your trouble". On the reverse side of the certificate, preceding the line for the signature of the minister, is the following statement: "My name is not to be mentioned. This is strictly confidential." As a further inducement for the referring of patients by members of the clergy another circular is included which says that "a high grade knife will be sent, absolutely free, to a selected list of ministers who will give us the names of one or more persons who, to their knowledge, are now afflicted with cancer, lupus, or tumor. This information will be regarded as confidential and your name will not be mentioned." Among the ministers who are endorsing this quackery we find one Indiana man, advertised as Reverend F. M. Huckleberry (a fruity sounding name but a "nutty" possessor), of Franklin, Indiana. The advertising matter states that in the treatment of cancer "a liquid laboratory product has been developed which is injected directly into the cancer or tumor". In order to show that victims must go to the fountain head for their treatment, the following statement is made: "We do not sell this product to anyone. (We have no agents.) Physicians or anyone would have to learn the technique of the injection treatment before giving it to patients and rather than have it misused, we allow it to be administered only under our personal supervision." Members of the clergy who endorse this kind of quackery, and especially those who accept the commission offered for referring victims, should be driven out of the churches with which they are connected. There is room in the world for intelligent, conscientious and honest ministers of the gospel, but imposters and hypocrites should be thrown out.

DEATHS

JAMES A. STAFFORD, M.D., aged 81 years, died at his home in Newcastle, September 12, 1921, as a result of a stroke of apoplexy. Dr. Stafford graduated from the Physio Medical Institute of Cincinnati in 1867.

GEORGE W. KIRKPATRICK, M.D., of Lafayette, Indiana, died at his home September 22, at the age of eighty-six years. Dr. Kirkpatrick had retired from active practice nearly fifteen years ago and was the oldest physician in Tippecanoe County.

JOHN F. CULLY, M.D., died at his home in Bainbridge as a result of apoplexy. Dr. Cully was a graduate of the Rush Medical College, Chicago, and was a member of the Putnam County Medical Society and the Indiana State Medical Association.

S. L. ENSMINGER, M.D., aged seventy-seven years, died at his home in Crawfordsville, September 25, 1921. Dr. Ensminger graduated from the Miami Medical College, Cincinnati, in 1874 and was a member of the Montgomery County Medical Society and the Indiana State Medical Association.

A. J. KESLER, M.D., of Fort Wayne, died September 14 as the result of a hemorrhage. Dr. Kesler had been coroner of Allen County and was a member of the city board of health. Dr. Kesler graduated from the Fort Wayne College of Medicine in 1886 and was a member of the Allen County Medical Society and the Indiana State Medical Association.

HENRY H. THOMPSON, M.D., of Noblesville, died of double pneumonia at his home, September 21, 1921, at the age of forty-four years. Dr. Thompson was a graduate of the Washington University Medical School, St. Louis, and was a member of the Hamilton County Medical Society, the Indiana State Medical Association and the American Medical Association.

HARLEY H. SUTTON, M.D., of Aurora, died at his home, September 1, at the age of sixty-nine years. Dr. Sutton graduated from the Jefferson Medical College of Philadelphia in 1877. For many years he served as president of the Dearborn County Society for the Prevention of Tuberculosis. Dr. Sutton was a member of the Dearborn County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. A. M. KIRKPATRICK, of Columbus, Indiana, recently lost a tube of radium valued at $1,200.00.

DR. A. M. SULLIVAN and family, who have been in New York since last April, returned to South Bend October 1st.

DR. S. D. BEAVERS and son, Dr. Ben Beavers, have formed a partnership for the practice of medicine at Decatur, Indiana.

DUE to the general reduction of prices on everything the physicians of Gary have reduced their call charges to two dollars.

DR. G. L. MCNEAL, of Kokomo, has returned to his office for practice after an absence of nearly three months due to illness.

THE Reid Memorial Hospital of Richmond, Indiana, has received a bequest of $30,000.00 through the will of Mrs. Helen Dongan.

DR. and MRS. A. C. CHENOWETH have moved from Wabash to Andrews, where Dr. Chenoweth has taken up the practice of medicine.

THE Methodist Episcopal Hospital and Deaconess Home, of Indianapolis, is the recipient of $6,000.00 for the endowment of a room, by the will of Fidelia Anderson.

DR. ROBERT L. MCCLURE, of Gosport, Indiana, and Miss Lorena J. Eaton, of Princeton, Indiana, were married at Franklin, August 22, 1921.

THE Grant County Medical Society held a meeting at Van Buren September 20, 1921. The principal paper was presented by Dr. Fair, of Muncie.

DR. NELSON H. YOUNG, of Toledo, has been appointed senior physician at the National Sanatorium for Veterans of the World War at Marion, Indiana.

DR. H. S. HATCH, superintendent of the Sunnyside Sanitorium, Indianapolis, and Miss Violet Wilmetta Brewer, of Southport, were married August 5, 1921.

DR. J. C. BAXTER, of Auburn, has been appointed county physician of DeKalb County. His duties are to treat the patients at the county infirmary and county jail.

DR. W. W. HARRIS, of Ellettsville, Indiana, who was in charge of the federal war risk board until its recent abolishment, will reopen his office on North Washington street.

DR. T. SCOTT SCHILDT, of Bremen, Indiana, will remove to Princeton, where he has purchased the property, equipment and practice of an old physician, for the practice of medicine.

DR. E. D. CLARK, of Indianapolis, who was operated for gall stones at the Lakeside Hospital, Cleveland, the latter part of September, is reported as making a very satisfactory recovery.

DR. and MRS. R. S. GALBREATH will leave Huntington the first of November to spend the winter in New York, where Dr. Galbreath will take a course in surgery. They plan to return to Huntington in the spring.

DR. L. L. BULLEIT, of Palmyra, is taking a six months' postgraduate course in Chicago after which he will locate and continue his practice. His present practice will be taken up by Dr. Robertson, of Campbellsburg.

THE Washington County Medical Society held its regular meeting at Salem, Wednesday evening, September 7. A paper on obstetrics was presented by Dr. W. L. Green and several reports on cases of typhoid fever were given.

DR. JOHN H. WILLIAMS and family, of Cowan, Indiana, have recently returned from a motor tour of the East, having covered the whole trip of 3,000 miles with a camping trailer, and sleeping in the open during the whole trip.

THE regular monthly meeting of the Anderson Academy was addressed by Dr. D. W. Crile, of the Augustine Hospital in Chicago, on the subject of "Fractures". Drs. T. E. Eckhart, of Marion, and S. A. Marshall, of Kokomo, also discussed this subject.

DR. C. W. HOWARD, of Crawfordsville, and Miss LaVerna Schultz, of Newtown, were married August 27, 1921. After a short wedding trip they will be at home in Crawfordsville where Dr. Howard specializes in the practice of the eye and ear.

THE U. S. Public Health Service has arranged to hold a series of twenty-four institutes at various population centers throughout the country. No tuition is to be charged for these institutes, one of which will be held at Indianapolis from February 13 to 18.

ANNOUNCEMENT has been made of the establishment of a new firm in Franklin, Indiana, by the name of Records & Records, the members of which are Drs. John N. Records and A. W. Records. They will occupy the offices left vacant by the late Dr. L. L. Whitesides.

DRS. C. R. BIRD, D. E. DOUGLAS and W. E. THOMAS have been appointed surgeons to take the place of Dr. Paul Tindall on the Big Four Railroad. While there has been only one surgeon doing this work, it was decided to divide the work among three.

ACCORDING to plans completed by Secretary Hoover several hundred nurses will be recruited in the United States for the purpose of aiding in giving American relief to Russia's needy children. It is expected that, for the most part, these will be selected from the number who saw service in France.

THE Agricultural Department of Purdue University has furnished valuable ideas and instructions to the State of Indiana concerning bovine tuberculosis. Already thirteen counties of the state have launched campaigns against that disease. It is the plan to eliminate all tuberculosis in beef and dairy cattle.

DR. KATHRYN M. WHITTEN, of Fort Wayne, and Dr. A. H. Unthank, a dentist of Marion, were married August 24, 1921, at their home which they recently purchased in Fort Wayne. Dr. and Mrs. Unthank will continue their practices in their combined offices at 343 West Wayne street, Fort Wayne.

THE Whitley County Council has appropriated a thousand dollars for the purpose of building two portable cottages for the care of tuberculosis patients and to aid in carrying on the nurses' services. A plan is also under consideration for paying for the upkeep of five beds at the Irene Byron Hospital at Fort Wayne.

THE Tri-State District Medical Society has issued an invitation to the physicians of Indiana to attend its annual assembly which is to be held at Milwaukee, Wisconsin, November 14th, 15th, 16th and 17th. There will be addresses by many well known doctors. Dr. Charles P. Emerson, of Indianapolis, will present a paper on "The Treatment of Chronic Nephritis".

THE Indiana State Nurses' Association, together with the hospitals and Red Cross, are developing a movement to stimulate interest in the nursing profession. The state will be divided into districts and a very complete program will be carried out in each community. The number of trained nurses in this country has been greatly decreased and it is hoped that this campaign will help to bring this number back to its full strength.

A POSTGRADUATE course in anatomical and operative surgery on the head and neck will be offered by the Indiana University School of Medicine at Indianapolis, beginning October 24, 1921. The course will be conducted by Dr. John F. Barnhill, Professor of Rhinology, Otology and Laryngology. Further particulars regarding this course may be obtained from the Registrar, Indiana University School of Medicine, Indianapolis, Indiana.

THE members of the Indianapolis Board of Park Commissioners have announced that ground lying between the Robert W. Long Hospital and the City Hospital, facing the proposed site of the Riley Memorial Hospital for Children, will be acquired by the park board for use as a convalescent park. It has been pointed out that establishment of the three hospitals in close proximity will result in economical operation through combined facilities.

THE American Hospital Association held its annual meeting at the West Baden Springs Hotel, West Baden, Indiana, September 12-16. Papers were presented by Dr. Haven Emerson on the Bureau of War Risk Insurance; Dr. Malcolm T. MacEachern, on "What Constitutes Good Service to the Public"; Charles S. Woods, on "The Development of Good Professional Work in the Hospital"; Franklin Martin, on "The Work with Hospitals by the American College of Surgeons"; and a paper by Dr. Franklin R. Nuzum on "A Method for Increasing Medical Efficiency Within the Hospital". The president for the next year is Dr. George O'Hanlon, superintendent of Bellevue Hospital, New York.

THE memorial to be erected to Dr. John B. Murphy, noted doctor and teacher, is to be in the form of a beautiful building which will be dedicated to the service of the American College of Surgeons of which Dr. Murphy was a founder. Mrs. John B. Murphy recently passed away, leaving $100,000.00 in support of the memorial conditional upon the entire $500,000.00 being raised and the proposed building begun within a limited time. Therefore, special efforts are being put forth to obtain the remaining $300,000.00, $200,000.00 already having been received. Doctors are especially urged to contribute to this worthy memorial and all contributions will be welcomed. Address Dr. John B. Murphy Memorial Association, Room 1314, 30 North Michigan Avenue, Chicago.

THE Eleventh District Medical Association will hold its annual meeting at the Marion National Sanatorium, Marion, Indiana, Oct. 20, 1921. The following program will be carried out:

From 11 A. M. to 12:30 P. M.—Clinics at the Marion National Sanatorium, by Dr. Wm. MacLake, Medical Director and Superintendent.

2:30 P. M.—Inspection of hospitals and laboratories under guidance of Sanatorium staff. Business session and Scientific Program.

The following papers will be presented: "Ectopic Pregnancy," by Dr. C. H. Good, Huntington; discussants—Drs. G. G. Eckhart and Wallace Grayston; "The Management of Nephritis," by Dr. Wm. A. Jenkins, Louisville, Ky.; "The Place of the Public Nurse," by Dr. James Wilson, Wabash; discussants—Drs. J. H. Reed and E. O. Daniels.

AN Institute on the Nutrition Problems of Children will be held at Indianapolis for two weeks, beginning October 24, 1921. It will be conducted by Dr. William R. P. Emerson, of Boston, and will be under the auspices of the Marion County Tuberculosis Association. The institute will be open to all teachers, nurses, dietitians, social workers and other interested people.

The entire time of the students will be taken up by the institute for the two weeks, and lectures will cover the various phases of nutritional work. Actual demonstrations will be presented in the nutrition classes which will be organized in the Indianapolis schools before the institute begins, and these classes will be continued throughout the school year. Special lectures will be arranged for late in the afternoon or evening with the cooperation of Parent-Teacher Associations, Women's Clubs, etc. There will be no admission fee to these lectures. The total cost of the Institute, including tuition fee, will be twenty-five dollars. A reduced fee of ten dollars is made to people of Indianapolis and Marion County.

Further information may be secured from the office of the Marion County Tuberculosis Association, 1138 Pythian Building, Indianapolis, Indiana.

DURING September the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

The Abbott Laboratories: Procaine-Adrenalin Hypodermic Tablets No. 2.

Dry Milk Co.: Protolac.

Hynson, Westcott & Dunning: Tablets of Benzyl Succinate—H. W. and D.

Intra Products Co.: Ampules Ven Sterile Solution Mercury Oxycyanide 0.008 Gm. Ampules Ven Sterile Solution Mercury Oxycyanide 0.016 Gm.

Lederle Antitoxin Laboratories: Acne Combined Vaccine.

Mead, Johnson & Co.: Casec.

N. Y. Intravenous Laboratory: Loeser's Intravenous Solution of Mercury Oxycyanide.

Seydel Mfg. Co.: Benzyl Succinate—Seydel.

Nonproprietary Articles: Benzyl Succinate. Calcium Caseinate.

THE Indiana University School of Medicine announces a postgraduate course in blood chemistry, methods of testing kidney function, acidosis, and basal metabolism, to occupy a period of about ten evenings, for physicians of Indianapolis and the vicinity. The laboratory of the Medical School building will be open for this purpose on Thursday evenings from 7:00 till 10:00 o'clock throughout the coming year, commencing October 27. The principal subjects to

be covered will be determination of urea in the blood, relation between urea excretion and blood urea concentration as expressed by Ambard and others, determination of creatinine, uric acid, and sugar in the blood, detection of acidosis and determination of alkaline reserve, determination of alveolar carbon dioxide and measurement of basal metabolism. Short explanatory lectures will be given at intervals, but the work will be chiefly of a practical character, provision being made for each member of the class to carry out analyses himself. The course is to be conducted by B. B. Turner, professor of pharmacology and biochemistry, assisted by Hobart Rogers, associate.

THE National Board of Medical Examiners has just completed the first five years' work and with it the trial period of its usefulness. The principle which this Board has stood for, namely, the establishment of a thorough test of fitness to practice medicine which might be safely accepted throughout this country and abroad, has been widely accepted. Since this Board was organized by Dr. W. L. Rodman, in 1915, eleven examinations have been held. These examinations have been conducted on the plan of holding at one sitting a written, practical and clinical test for candidates with certain qualifications, namely, a four-year high-school course, two years of college work, including one year of Physics, Chemistry, and Biology, graduation from a Class *A* Medical School and one year's internship in an acceptable hospital. These examinations have covered all the subjects of the medical school curriculum and have been conducted by members of the Board with members of the profession resident in the place of examination appointed to help them. Such examinations have been held in Washington, Philadelphia, New York City, Boston, Chicago, St. Louis, Rochester (Minnesota) and Minneapolis. During the war a combined examination was held at Fort Oglethorpe and Fort Riley. There have been 325 candidates examined, of whom 269 have passed and been granted certificates.

Starting with the endorsement of the Council on Medical Education of the American Medical Association, American Medical College Association and various sectional Medical Societies, the recognition of the Army, Navy and Public Health Service Medical Corps of the United States and certain State Boards of Medical Examiners, the certificate is now recognized. Also by twenty states as follows: Alabama, Arizona, Colorado, Delaware, Florida, Georgia, Idaho, Iowa, Kentucky, Maryland, Minnesota, Nebraska, New Hampshire, New Jersey, North Carolina, North Dakota, Pennsylvania, Rhode Island, Vermont, and Virginia, the Conjoint Board of England, the Triple Qualification Board of Scotland, the American College of Surgeons and the Mayo Foundation of the University of Minnesota.

There has been such a wide-spread demand for an opportunity to secure this certificate by examination that the Board has now adopted and will put into effect at once, the following plan: Part I, to consist of a written examination in the six fundamental medical sciences: Anatomy, including histology and embryology; Physiology; Physiological Chemistry; General Pathology; Bacteriology; *Materia Medica* and Pharmacology. Part II, to consist of a written examination in the four following subjects: Medicine, including pediatrics, neuropsychiatry, and therapeutics; Surgery, including applied anatomy, surgical pathology and surgical specialties; Obstetrics and Gynecology; Public Health, including hygiene and medical jurisprudence. Part III, to consist of a practical examination in each of the following four subjects: Clinical Medicine, including medical pathology, applied physiology, clinical chemistry, clinical microscopy and dermatology; Clinical Surgery, including applied anatomy, surgical pathology, operative surgery, and the surgical specialties or the diseases of the eye, ear, nose and throat; Obstetrics and Gynecology; Public Health, including sanitary bacteriology and the communicable diseases.

Parts I and II will be conducted as written examinations in Class *A* Medical Schools and Part III will be entirely practical and clinical. In order to facilitate the carrying out of Part III subsidiary boards will be appointed in the following cities: Boston, New York, Philadelphia, Minneapolis, Iowa City, San Francisco, Denver, New Orleans, Baltimore, Galveston, Cleveland, St. Louis, Chicago, Washington, D. C., and Nashville, and these boards will function under the direction of the National Board. The fee of $25.00 for the first part, $25.00 for the second part and $50.00 for the third part will be charged. In order to help the Board the Carnegie Foundation has appropriated $100,000 over a period of five years.

At the annual meeting, held June 13th of this year in Boston, the following officers were elected: M. W. Ireland, Surgeon General, President; J. S. Rodman, M.D., Secretary-Treasurer; E. S. Elwood, Managing Director.

Mr. Elwood will personally visit all Class *A* Schools during the college year to further explain the examination, etc., to those interested. Further information may be had from the Secretary-Treasurer, Medical Arts Building, Philadelphia.

CORRESPONDENCE

JOHNS HOPKINS ON SURGICAL FEES

Cincinnati, Ohio, Sept. 6, 1921.

Editor of THE JOURNAL:

In the August issue of "The Journal of the Indiana State Medical Association," under Editorials on page 271, I found a short article entitled "Johns Hopkins Decision Concerning Surgical Fees".

In commenting on this article I beg to state that I agree with every word of it and am sure every other sane thinking physician does likewise. I only wish that other medical journals had the same courage to go after the "big fish" when the occasion demands.

I always have enjoyed reading your editorials and admire your courage in saying just what you think, and hope that you will continue along the same lines.

Sincerely yours,
C. J. BROEMAN, M.D

CHRISTIAN SCIENCE

Chicago, Ill., Sept. 3, 1921.

Editor of THE JOURNAL:

I have just finished reading your editorial on "Christian Science" and hasten to express my appreciation of your attitude toward this pseudo-religious medical fake. There are some near-sages who assert that deceit thrives on opposition. Any successful pickpocket is more than willing to be let alone, and the "Christian Science" pickpocket is no exception. Pitiless publicity is all that is required to counteract the mysterious fanaticism of the Eddyites. It is useless to expect the lay press to take any sensible stand in the matter, as members of this cult have hounded the newspapers into subjection. For a number of years I have been convinced that this baby-killing cult should be given the benefit of the spotlight. Every case of death due to neglect should be thoroughly aired; and where possible have it generally known who is responsible for the untimely death.

I trust your able excoriation of the praying pickpocketeers will be emulated.

Sincerely yours,
CHAS. E. HUMISTON (M.D.)
(President Illinois State Medical Society)

PRAISE FOR THE JOURNAL

Brazil, Indiana, Sept. 2, 1921.

Editor of THE JOURNAL:

As a member of the Indiana State Medical Association, I wish to express hearty appreciation of your work in editing THE JOURNAL. This year's issues have been the best yet, and while the scientific papers contributed by members have been of a high order of merit, your own editorial notes and leaders also have shown a sustained excellence and timeliness.

The series of articles by Dr. Frank B. Wynn is a most praiseworthy one, and quite remarkable for its fearless frankness in dealing with some more or less common shortcomings of members of our own profession. Your leading editorial this month on Christian Science is very much to the point, and the sentiments there expressed should be widely distributed among both profession and laity.

However, one of your notes intimating that the Indiana State Board of Health is about to be reorganized, leaving out the present Regulars and their influence, rather mystified some of us as to its possible hidden meaning. Of course we know that just lately there have been rumors as to some members and employees receiving double pay in some way, and the insinuation that probably city and county health officers were getting a wartime graft from Federal sources, etc. Local health men WERE asked to do a lot of extra work and the demand still continues, but all the time with no EXTRA REMUNERATION WHATEVER. I only hope that in reorganizing the State Board, if found necessary, that men of high ideals and strict integrity as well as high professional standing can be induced to take the management.

Very truly yours,
GEORGE W. FINLEY, M.D.,
County Health Commissioner.

APPROVAL FROM CALIFORNIA

San Francisco, Cal., Sept. 27, 1921.

Editor of THE JOURNAL:

I have received the extra copies of your Journal which we requested, and wish to thank you for the courtesy extended.

We have been particularly interested in the editorials. It is a pleasure to note that you are up and doing in your part of the world. We are trying to do the same.

Sincerely yours,
W. E MUSGRAVE,
Secretary, California State Medical Society.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	I. B. Dugdale	75	87
2.	Franklin	J. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	24
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Sliders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	27
15.	Washington	Irvin Huckleberry	5	13
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19
18.	Allen	Miles F. Porter, Jr.	95	105
19.	Greene	W. R. Cravens	16	18
20.	Henry	C. E. Canaday	25	29
21.	Switzerland	R. M. Copeland	7	8
22.	Fulton	A. E. Stinson	15	17
23.	Jay	C. A. Paddock	18	20

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

BEEBE PROTEIN MILK.—EDWEISS MILCH OF FINKELSTEIN.—A modified milk preparation having a relatively low content of carbohydrate and fat and a relatively high protein content. Each 100 Gm. contains approximately solids 10.2 Gm., carbohydrate 2.5 Gm., protein (casein) 5.3 Gm., fat 1.6 Gm., and ash 0.8 Gm. The acidity is stated on each package. The high protein content of protein milk is claimed to act as a preventive of fermentation and to serve as a medium in which a change in the intestinal flora takes place. Protein milk is said to be especially indicated in gastro-intestinal disorders of infants, accompanied by fermentation and diarrhea. Beebe Laboratories, Inc., St. Paul, Minn.

BEEBE MODIFIED BUTTERMILK.—Buttermilk with Flour.—Buttermilk modified formula of Langstein and Meyer.—Buttermilk containing flour partially dextrinized by heat.—Each 100 Gm. contains approximately total solids 9.7 Gm., carbohydrate 4.7 Gm., protein 3.3 Gm., fat 0.6 Gm., and ash 1.2 Gm. The acidity is stated on each package. Beebe Modified Buttermilk is offered as a means of combating intestinal fermentation by modifying the intestinal flora. Since it contains several forms of carbohydrates which have different periods of digestion, it is believed to afford an opportunity of assimilation without overtaxing the digestive powers. It is stated to be indicated in digestive disturbances of children and adults characterized by milk dyspepsia, fat intolerance, eczema and vomiting. Beebe Laboratories, Inc., St. Paul, Minn.

MERCURIC OXYCYANIDE.—For a description see New and Nonofficial Remedies 1921, p. 194. Mercuric Oxycyanide has been proposed as a substitute for mercuric chloride. Its antiseptic power is said to be greater and it is claimed to be less irritating than mercuric chloride because it does not act on albumin to the same extent. Representative syphilographers differ as to the use of mercuric oxycyanide intravenously. Some believe that its use should be limited to hospitals; others that it has no advantage over other and safer methods of administering mercury, while others consider it safe and valuable. But all are in accord that its safe use requires experience. Mercuric oxycyanide may be administered subcutaneously, intramuscularly or intravenously in the same doses as mercuric chloride.

LOESER'S INTRAVENOUS SOLUTION OF MERCURY OXYCYANIDE.—Each ampule contains 5 Cc. of solution, representing 0.008 Gm. mercuric oxycyanide, N. N. R. New York Intravenous Laboratory, New York.

AMPULES VEN STERILE SOLUTION MERCURY OXYCYANIDE, 0.008 GM.—Each ampule contains 5 Cc. solution, representing 0.008 Gm. mercuric oxycyanide, N. N. R. Intra Products Co., Denver, Colo.

AMPULES VEN STERILE SOLUTION MERCURY OXYCYANIDE, 0.016 GM.—Each ampule contains 5 Cc. solution, representing 0.016 Gm. mercuric oxycyanide, N. N. R. Intra Products Co., Denver, Colo. (*Jour. A. M. A.*, Sept. 10, 1921, p. 863).

CALCIUM CASEINATE. — Calcii Caseinas. — Casein from cow's milk, rendered partially soluble by combination with calcium and containing not less than 1 percent of calcium. The diarrheal diseases of infancy are now generally treated by dietetic measures. A useful food may be made from the curd of milk and diluted buttermilk, the resultant mixture containing a moderate amount of fat, a small amount of sugar and a large amount of protein (casein) and salts, particularly salts of calcium. A mixture of calcium caseinate and milk is also used. For children, calcium caseinate is mixed with milk and water or milk and gruel in the proportion of 10 Gm. calcium caseinate and one pint of the liquid and the mixture boiled. Calcium caseinate is a yellowish powder, free from rancid or sour odor. With warm water it forms a turbid suspension. Calcium caseinate must not contain more than 10 percent of moisture, nor more than 2.5 percent of fat and not less than 14 percent of nitrogen.

CASEC.—A brand of calcium caseinate, N. N. R. Mead, Johnson & Co., Evansville, Ind.

BENZYL SUCCINATE.—Benzylis Succinas.—The dibenzyl ester of succinic acid. Benzyl succinate lowers the tone of unstriped muscle, its action being similar to benzyl benzoate in this respect. It is superior to benzyl benzoate in being less irritating, less nauseating and in containing a greater proportion of benzyl radicle. Its use has been suggested as a renal, biliary, uterine and intestinal colic, excessive intestinal peristalsis, dysmennorrhea, hiccough and other spasms of unstriped muscle. Its clinical use is still in the experimental stage. The dose is 0.3 to 1.0 Gm. Benzyl succinate is a crystalline, odorless and almost tasteless powder. It is almost soluble in water, but soluble in alcohol.

TABLETS OF BENZYL SUCCINATE-H. W. and D.—Each contains benzyl succinate, N. N. R., 5 grains. Hynson, Westcott & Dunning, Baltimore.—(*Jour. A. M. A.*, Sept. 25, 1921, p. 1023).

PROPAGANDA FOR REFORM

THYROID IN OBESITY.—J. H. Means carried out studies which show that the basal metabolism is normal in cases of simple obesity. The wide-spread treatment of obesity by the administration of thyroid preparations is a device for raising metabolism to an abnormal level. The treatment of simple obesity by producing a state of hyperthyroidism has recently been designated as pernicious by Means. Simple obesity can now readily be differentiated from the obesity due to endocrine disorders by determination of the basal metabolism. If this is normal, weight reduction should not be attempted by the use of thyroid.—(*Jour. A. M. A.*, Sept. 3, 1921, p. 792).

MAGHEE'S EPILEPSY TREATMENT.—This is sold on the mail-order plan by Thomas G. Maghee, M.D., Lander, Wyo. The product is advertised with the claim that it stops all seizures from the first day of its use. A five dollar size package containing 40 capsules was submitted to the A. M. A. Chemical Laboratory for analysis. The examination indicated that each capsule contained about 1 grain phenobarbital (luminal), ½ grain charcoal and a little bismuth subnitrate. There is no rational excuse for the sale of phenobarbital (luminal) in a secret mixture sold for the self treatment of epilepsy.—(*Jour. A. M. A.*, Sept. 24, 1921, p. 1037).

THE EXPENSIVE "POOR MAN'S MEDICINE".—A favorite argument of the nostrum exploiters, advanced when threatened with restrictive legislation or taxation, is that "patent medicines" are the poor man's medicine. Never had a pretension a flimsier basis of fact. The purchaser who buys a bottle of Dr. Quack's Quick Cure does not realize that about 75 cents of his dollar has been expended by Dr. Quack in an effort to convince him that he is suffering from something for which "Quick Cure" is a sure-shot remedy. The abolition of "patent medicine" advertising would do much to abolish the making of hypochondriacs by suggestion and would result in a great decrease in all drug taking. In addition, if John Doe purchased a simple home remedy, he would have to pay for the cost of the medicine only and not for an expensive advertising campaign to promote its sale.—(*Jour. A. M. A.*, Sept. 10, 1921, p. 867).

DIPHTHERIA PREVENTIVE MEASURES.—It seems likely that the securing of widespread immunity is to be an important aim in the prevention of diphtheria. In this work the Schick test, whereby the existence of immunity or susceptibility to diphtheria can be determined with ease and precision, seems destined to play an important part. Thousands of tests have been applied to school children of New York. Further, in the recent test of more than 52,000 school children of New York, those who gave a positive test were injected with toxin-antitoxin mixture to secure active immunization. If the medical profession accepts the contention that the Schick test is a reliable indication of the susceptibility to diphtheria and, further, that the currently proposed methods of toxin-antitoxin injections are effective in developing a lasting immunity, a great step in progress will have been made.—(*Jour. A. M. A.*, Sept. 24, 1921, p. 1025).

A NEW SELENIUM CANCER CURE.—Medical journals have received "news items" from the "Medical News Bureau" (D. E. Woolley, manager) which announce that for the purpose of further developing methods of control and treatment of disease by the use of selenium and tellurium, the Basic Cancer Research has been organized and a laboratory established at 847 Union St., Brooklyn. Newspapers, on the other hand, have received free publicity matter from the Cosmopolitan Research Society (D. E. Woolley, secretary) according to which this society has been founded to investigate and develop methods for the treatment of cancer. It is further stated that "Dr. Frederic Klein, the eminent authority on urinology and the chemistry of cancer, has evolved a new colormetric test which is the most wonderful and valuable discovery in the diagnosis of cancer and various other diseases". Klein is the gentleman who made "Sulpho-Selene", a cancer "cure" which the Council on Pharmacy and Chemistry refused recognition some years ago. Is "Sulpho-Selene" to be resurrected?—(*Jour. A. M. A.*, Sept. 3, 1921, p. 805).

The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Mott's Compound Female Pills (Williams Manufacturing Co.), consisting essentially of aloes, ferrous sulphate and cantharides and falsely claimed to restore the menstrual flow and to be beneficial in female disorders. Job Moses, J. Clarke's Female Pills (Williams Manufacturing Co., and Eastern Drug Co.).

(Continued on Adv. page xviii)

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BALTIMORE

(Continued from page 370)
consisting essentially of aloes, a salt of iron and oil of peppermint, falsely claimed to be good for many painful and dangerous female disorders. Gono Capsules 761, Renol Capsules, and Gonna Specific (Grape Capsule Co.), capsules containing salol, oleoresin of cubebs, copaiba balsam, pepsin, cottonseed oil and plant extractives and falsely labeled as remedies for "Gonorrhea, Gleet and All Kidney and Bladder Troubles". Haskin's Nervine (Haskin Medicine Co.), a solution of Epsom salt, sweetened, flavored and colored, and asserted to be the great nervine and blood purifier and for the treatment of a very long list of disorders.—(*Jour. A. M. A.*, Sept. 17, 1921, p. 958).

TREATMENT OF "HAY FEVER".—Although the essential features of the etiology of "hay fever" are believed to be understood, the treatment is still largely of the hit or miss type. Preparations of mixed pollens are distributed by commercial houses and used by physicians in the hope that some ingredient will prove to be potent. Several facts seem at length to be so well established that they may serve almost as axioms in the clinic of hay fever. One of these is that although the offending pollens vary in different parts of the world as well as at different seasons, the number chiefly responsible for the attack in any single locality is comparatively small. Hence it becomes the duty of the physician to familiarize himself with the offending pollens in his locality or the locality whence his patients hail. Fortunately I. C. Walker has reported on the pollens which are responsible for "hay fever" in the New England states; G. Selfridge on those in California; K. K. Koessler for Illinois, and W. Scheppegrell for the Southern states. It is important that for each case of "hay fever" the offending pollen should be determined by skin tests and also that the treatment should be preseasonal (although treatment during the season may sometimes benefit). In extenuation of the frequent failure to relieve patients, it is to be noted that certain persons have symptoms ranging from sneezing to asthmatic attacks due to the odors of flowers that have no pollen as well as to the presence of nonspecific factors in the respired air. Obviously, pollen extracts are of no avail in such cases. —(*Jour. A. M. A.*, Sept. 3, 1921, p. 791).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Equinox Lithia Water (Equinox Mountain Spring Co.), falsely claimed to be a natural mineral water. Antilaiteuse (Dr. N. A. Sirois), consisting essentially of Epsom salt and ground juniper berries falsely claimed to be able to cleanse and relieve the body and blood of all poisonous impurities. Madam Dean's Female Pills (Martin Rudy), consisting essentially of quinine, aloes, ferrous sulphate, hydrastis, ginger and cornstarch, falsely claimed to give relief in female disorders. Donaldson's Wonderful New Life Remedy (T. Donaldson Medicine Co.), essentially an alkaline solution containing Epsom salt, senna, plant extractives, alcohol and small amounts of volatile oils, falsely claimed to be one of the greatest kidney medicines in the world. Prescription 999 (Combination Remedy Co.), a mixture of fixed and volatile oils, including oils of sandalwood, nutmeg and copaiba, and falsely labeled as a remedy for gonorrhea or gleet. Kellogg's Sanitone Wafers (F. J. Kellogg Co.), containing salts of iron and chromium, a laxative plant extractive, red pepper and a trace of strychnine, sold under the false claim that locomotor ataxia is curable with chromium sulphate. Acme Brand Pennyroyal Pills (S. Pfeiffer Mfg. Co.), consisting of aloes and oil of pennyroyal and tansy, sold under claims usual to nostrums for the alleged cure of suppressed menstruation. Cadomene Tablets (Blackburn Products Co.), consisting essentially of zinc phosphide, strychnine and iron salts and recommended for neurasthenia, general debility, melancholy, etc. Leonardi's Injection No. 1 (S. D. Leonardi & Co., Inc.), essentially an alkaline solution of borax, camphor and berberin, and falsely claimed to be an effective remedy for gonorrhea and gleet. Dr. J. H. McLean's Sarsaparilla Compound (Dr. J. H. McLean Medicine Co.), a "blood purifier" consisting essentially of iodides, a laxative plant drug, saponin (sarsaparilla), plant extractives, salts of iron, potassium, and sodium, sugar, alcohol, and water.—(*Jour. A. M. A.*, Sept. 10, 1921, p. 879).

TREATMENT OF TUBERCULOSIS OF THE ANKLE IN AN ADULT

The prognosis of tuberculosis of the ankle in the adult with conservative treatment, according to F. J. Gaenslen and C. C. Schneider, Milwaukee (*Journal A. M. A.*, Oct. 8, 1921) is poor. In the present series no case of astragalotibial disease was treated conservatively, the only nonoperative case reported being one of the subastragalar disease. The duration of conservative treatment in the cases terminating favorably, according to the only statistics referring to adults, is four years. A six months' period of conservative treatment will probably be sufficient to determine efficiency of this form of treatment. In cases in which operation is performed early it is probably safe to say that the patient will return to work in between one and two years. Statistics show that amputation and also death from other forms of tuberculosis is far too frequent because conservative measures are persisted in for too long a period. In further reports, separation of cases into adult and childhood groups is urged.

COUNTING OF BLOOD CELLS AND BACTERIA

By substituting hen's erythrocytes, with their distinctive appearance, for human red cells as the standard suspension; by preparing them in such a way that they form a stable, unchanging standard suspension; by enumerating the standard suspension with great precision in an accurate counting chamber; by mixing standard suspension in measured proportion with the suspension to be enumerated, and counting them in the wet state, George Dreyer, Oxford, England (*Journal A. M. A.*, Oct. 8, 1921) asserts a very accurate method for the enumeration of human red cells and bacteria is achieved without sacrificing any of the rapidity of Wright's technic. The details of the procedure are given.

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Next Annual Session, Muncie, September 27, 28, 29, 1922. List of Officers and Committees on Adv. Page 2. Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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There has been a persistent call *for the right book* on this subject and we believe that Dr. MacKee, out of his long clinical experience, has written it. In addition to the sections on the various cutaneous affections the chapters on Apparatus, Tubes, Measuring *X*-ray Dosage, Practical Roentgen-ray Technic (Unfiltered), Technic for the Beginner, Filtered Roentgen-ray Technic, Radium Technic, Clinical Effects of Radium and Roentgen Rays on the Skin, Action of *X*-rays and Radium on Pathological Tissue and General Therapeutic Considerations will be found most practical and instructive, while the value of the chapter on The Medico-legal Relations of Roentgen Therapy and Radium Therapy will be appreciated by all.

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ORIGINAL ARTICLES

MEDICINE AND STATE CONTROL

DR. DAVID ROSS,
INDIANAPOLIS, INDIANA

Probably no question interests the medical profession more than the proper relation of the State to the practice of medicine. Certainly the powers that grant privileges should retain the right to say what shall be the conditions under which these privileges are used. The present status of the State to the education of physicians and the practice of medicine in all of its phases has been a slow evolution in which certain fundamental principles have been established. It is a long cry from the early standards of medical practice, not only in Indiana but in all the states, to the standard of today, and we may rightly claim that we have one standard throughout our country because of the uniform requirements in all states. State control of the education of medical students, and a standard agreed upon by members of the several colleges, make this possible and certain because the requirements of the men who practice the healing art not only may but must be the same no matter where the art is practiced. Education is eminently one of the functions of the State in its relation to medicine, nor does that education necessarily end with the fitting of the student for his life work, but may legitimately be extended to propaganda which informs and educates the public in all matters pertaining to hygiene, affecting not only the individual, but especially when through the individual the community at large is affected.

Prophylactic medicine must always be a function of the State. Improper hygienic conditions or carelessness in the quarantine regulations of any person or locality is a menace to all, and that which affects the welfare of all citizens must be dictated and controlled by the only power that has authority over all the people. It cannot be left to the individual opinion or whim.

Those mentally and morally deficient must have State care. Not simply that these unfortunates must be cared for in the most efficient way possible, but because the welfare and safety of all citizens demand it. To these we may add the indigent from whatever cause, because they are a public charge and for humanity's sake must be cared for. But I think I may safely say that outside of these latter classes when the State in any form undertakes the practice of medicine and cure of disease among its citizens in private life, it has gone beyond that which is best for the progress of the science and art of medicine, and for those who should be served and benefited by it.

Some have likened the State in the practice of medicine to its function in education, but the one is of general interest and moment in a large sense, while the treatment of disease is primarily and almost wholly an individual matter. In all matters pertaining to the citizen's individual and family life he must be left as free as in matters of conscience and religion, and restricted only when it affects the general good.

The American citizen is sometimes called a faddist, and one of his fads is to fly to legislation to cure any and all ills that exist. Wise, sane, needful legislation is a great aid to betterment of conditions, but unless the need precede the legislation, and we, the people, be sufficiently educated to see the need and demand the remedy, mere legislation is worse than useless.

In 1883 Bismarck caused to be legally adopted in Germany compulsory health insurance, to appease the clamor of the proletariat and thereby strengthen the monarchial form of government. It doubtless temporarily, at least, accomplished his purpose. Statistics do not prove that it was of lasting good to those supposed to be served by it.

If compulsory insurance or state medicine is needed it must be shown that a considerable number of people are not getting and cannot get proper medical and surgical care under existing conditions; that too much sickness exists; that time lost by sickness is greater than should be under proper conditions, and consequently

*President's address presented at the Indianapolis session of the Indiana State Medical Association, September, 1921.

unnecessary suffering, needless loss of time, causing too great financial loss to employer and employed. Its continuance can only be justified by its alleviating or curing these conditions. It does not follow that because conditions are not ideal as they exist, that they will be so if free medical and surgical treatment are provided for each individual. In fact, something for nothing or without due effort on the part of the recipient is a curse rather than a blessing. A committee having the matter in hand estimated it would cost seventy million dollars to carry out the provisions of such a measure, compulsory health insurance, in Illinois. Such a drain on the resources of a state can only be justified by the lessened morbidity and mortality. Have such results maintained where such measures have been tried?

If we compare those European countries where such methods have been tried we not only find their sickness and death rate greater than those around them, who do not have compulsory insurance, or state controlled practice of medicine, but that matters are worse with them than before the advent of such methods. Quoting from an address by Dr. Chas. J. Whalen: "Not only do the wage-earners of Germany and Austria lose more time through sickness under compulsory health insurance laws than in the United States without such laws, but it is also interesting to note that it has produced in the habits of the German and Austrian workers a tendency to become sick, to imagine they are sick, or to make believe they are sick. The figures are illuminating. In Germany out of every 1000 insured wage-earners 36.7 were listed as sick in 1890, and 45.6 in 1913. In Austria the corresponding figures were 45.7 in 1890, and 51.8 in 1913. In Germany the average number of days for each sick member increased from 16.2 in 1890 to 17.4 in 1913. The average number of days' sickness per insured member, which was 5.9 in Germany in 1885 when the law had just gone into effect, increased to 6.19 in 1890 and 9.19 in 1913, while the Austrian statistics from 1890 to 1913 show an increase from 7.98 to 9.45 days. Not only did the duration of sickness per person increase, but more persons were reported sick in Germany and Austria in 1913 than in 1890, showing compulsory health insurance laws did not prevent sickness, nor minimize its duration and, therefore, did not promote efficiency."

"In 1912 the death rate in Germany was 15.6 per thousand population. In Austria 20.5, and in Hungary 23.3. Now compare these figures with the mortality ratio in several countries which had no compulsory health insurance laws in effect. In the same year the death rate in Australia was 11.2; in New Zealand, 8.9; in Sweden, 14.2; in Switzerland, 14.1; in Belgium, 14.8; in Denmark, 13; in The Netherlands, 12.3; and in the United States 13.9, which was further reduced in 1915 to 13.5."

"This low rate was obtained despite the fact that the ordinary tendency to disease is aggravated by a great variety of climates in the United States, by diversity of races represented in our population and the fact that the United States has kept its doors open to millions of immigrants unused to our changes of climate; many of them wasted by toil and privation in their homeland."

Hon. Francis Neilson, ex-member of British Parliament, a student of political economy, speaking before the Chicago Medical Society in December, 1916, said that social insurance in England is a dismal failure. He says one has but to investigate all conditions to prove it. Under the laws the people are entitled to the best medical service money can buy, but in countries which have adopted compulsory health insurance they are getting the worst medical service in the world.

Alfred Cox, M.B.B.S., Medical Secretary of the British Medical Association, in a series of articles in May 7, 14 and 21, 1921, of the *A. M. A. Journal*, brings Britain's experience with national health insurance up to date under the title of "Seven Years of National Health Insurance in England". (A Retrospect.)

He evidently tries to state the matter very completely and fairly. He urges the consent and cooperation of a large majority of the doctors wherever the plan is tried. That without aid and cooperation of the parties most concerned the plan must be a failure. England's funds are provided from the three-fold source: The regular payment by the head of the house benefited, the company in whose employ he is, and the government. His report as a whole is favorable to the system, though he says there is great variety of opinions both among the doctors and the laity. He states that the average doctor engaged in the practice is probably better paid than before compulsory insurance went into effect, because previously to that many of them did contract work at a lower per capita fee than the government pays. That a better feeling exists between the profession and authorities than at first because many of the points of contention have been ironed out and the doctor is getting more recognition in the work than formerly. No statistics are given at any time; all statements are based on the writer's opinion from his own observations. His conclusions in regard to its application to America are against rather than for the system.

He advises that some organized plan should be worked out by the profession and government that those unable to provide their own

medical and surgical care should be more definitely provided for, not leaving it to the unorganized effort and charitable instincts of the doctor at his own expense. He concludes, however, with the statement that unless America has a very large percent who are unable to provide for themselves it should not be tried on this side of the water.

I have quoted two men probably alike competent, from different angles, to express an opinion, probably both alike sincere, and yet widely different conclusions are reached as to local effects. May I not emphatically suggest that we must take into consideration the wide difference in conditions in America and even in England, probably the most favored of European countries. What will appear good to a Briton will not satisfy an American. Such arrangements are un-American. The glory of America has been freedom for all within her borders and that freedom as absolute as consistent with good government, and the rights of others. Since the sailing of the Mayflower till the present day men have sought our shores that they and their families might enjoy a freedom Europe did not offer. Not only a freedom that the early pioneers sought (to worship God according to the dictates of their conscience), but a freedom to win and enjoy by their own efforts all that pertains to man's estate. Are we now going to offer them and their descendants a stone instead of bread, or a venomous something which, if offered and accepted, will at last bite like a serpent and sting like an adder.

Dr. Vaughn says, "There must be a minimum of interference with the relation which has so long existed between the physician and his patient and which, on the whole, has proven so satisfactory to both. The patient must have the right to select his physician, and the physician must have the right to study and prescribe for his patient as he sees fit. The pecuniary reward that comes to the physician must be determined between himself and his patient. There must be no state regulation in these methods. The panel system, as employed in England, is good for neither physician nor patient. There must be no state appointed doctors to administer to the needs of those who are able to pay medical fees."

"In armies it is necessary to have medical officers, and those over whom they are placed must accept the services of such medical officers whether they like it or not. We admit this is essential in military organizations, but we believe that such a practice would be harmful in civil life, and would lead to deterioration on the part of medical men and to discontent on the part of those whom they serve."

All plans for state medicine or compulsory insurance leaves out of consideration one of the most important parts in the practice of medicine—the personal element. They seem to think that medical service can be bought and sold like ordinary merchandise for so many dollars. A father disappointed in the outcome of his son's training and development, complained in his chagrin and disappointment, "Why, I gave him from earliest babyhood everything money could buy." The retort was, "You have failed because you have given him so little money cannot buy." Do you want in any capacity, especially in times of sickness and suffering a time server who gives only what money brings? He is a poor physician who does not give more than his technical skill and his drugs. That element of every good physician which cannot be bought in the marts of trade—that human sympathy and understanding—often turns the tide and saves life and gives happiness that is lasting. Can you expect it to any degree when patients are treated at so much per, because a state chooses some man to do a certain task?

When you rob a man of the right to care for his own you rob him of the most divine and ennobling right that the state or God himself has ever bestowed upon a human being. "He that looketh not after his own and especially those of his own household has denied the faith, and is worse than an infidel." Why force him into such a position?

A claim made in justification of this procedure is that men are not able to supply the money to secure medical services for themselves and family. When that is true conditions are not normal. Either there has been unusual demands or the breadwinner has been unable through sickness or other unusual misfortune to meet such demands.

If there have been no unusual conditions either in the demands or the individual's ability to earn a livelihood, then the question ceases absolutely to be a medical one, and becomes a social or economic one. Then there is no more excuse for giving these families free or partly free medical aid than there is for paying their rent or grocery bill in whole or part, which would at once put them on the pauper list. Any donation in any line is only palliative, not curative.

When any able bodied man under ordinary circumstances cannot care for his dependents, he is either paid too little for his work, or he is putting to poor use the money he earns.

It is impossible to even mention the many objections to this pernicious proposal whether in the form of State medicine or compulsory

health insurance, but to me the most vital is the loss of self-respect that comes to any man when he accepts help and brands himself as a dependent when the thing should come to him as his right in payment for his labor, he soon becomes lethargic and indifferent. The American soldiers were noted for their resourcefulness in times of stress, and that came not from a few months' training, no matter how effective, but because all their lives they had been free, independent citizens, and depending upon their own resources and when the crisis came they met it.

One of the striking things in this discussion is that those supposed to be benefited by such legislation and those most concerned in its enforcement if enacted into law, the laborers and the doctors, do not favor it. James W. Sullivan, Mark A. Daly and Samuel Gompers, in papers read at the 20th annual meeting of the National Civic Federation, January 30th, 1920, at Hotel Astor, all oppose such laws. Samuel Gompers in conclusion said, "But I do want to take this occasion just now to say that it has come to me recently some person has declared that Gompers has been won over to compulsory health insurance. I have already made my answer, which is, that I am unalterably opposed to it."

One of the greatest incentives that a physician or surgeon has is his independence of action, that his success is limited only by his ability. Why should the state in times of peace take this right and demand his services under many restrictions?

You do not need to go to countries where such laws are in effect to learn what it will do for the quality of service given and the general progress of medicine. One of the greatest incentives to labor is the individual recognition and reward. Many may do splendid work for the work's sake, but we all will do better when we add to that the personal reward for personal accomplishment. The quality of service is bound to deteriorate if the state as our taskmaster says, go here or go there.

The challenge of State medicine to every practitioner is better work, more intelligent, conscientious work. Let us look askance on any plan or scheme that takes the control out of the hands of the men who have nobly and loyally served their day. Let no plan, however alluring and attractive, be accepted that robs the physicians of any of their freedom or may lead to the limitation of any of their rights as physicians.

TO LESSEN THE ANESTHETIC RISK

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Since 1847, when chloroform was introduced by Simpson, who regarded it as more portable, more manageable and powerful, more agreeable to inhale, and less exciting than ether, and an agent giving greater control and command over superinduction of the anesthetic state, the medical profession has been divided in its opinion between ether and chloroform as the anesthetic par excellence. Each has had its advocates who could see no virtue in the other, but the surgeon or anesthetist of today who would insist on the use of either ether or chloroform in every case, to the exclusion of the other, shows a lack of knowledge of the therapeutics of these drugs and bases his preference on the fact that he has used one or the other for many years and has never had an accident. Such arguments, mentioned at the beginning of this article, as brought forward by Simpson in his advocacy of chloroform, are absolutely worthless in the selection of an anesthetic, because they do not take into consideration the safety of the patient. The question to be decided by the anesthetist is not whether ether or chloroform is more portable, less exciting, more pleasant to inhale, but in a given individual case which anesthetic is least dangerous to the life of the patient.

Statistics regarding the relative fatality of anesthetics point to greater danger from chloroform than from ether, but all statistics on the subject are unreliable, as it is impossible to exclude contributory causes. There seems no doubt that failure of both heart and respiration, without known cause, are more frequent from chloroform than ether. There is no argument so clinching as this for the universal use of ether except in cases in which ether is positively contraindicated. There is nothing more deplorable than sudden death from an anesthetic given for some minor operation; it is heart breaking to the anesthetist and surgeon and unforgivable by the family of the patient.

It generally is conceded that the after-effects of ether are more marked than those of chloroform; that post anesthetic pneumonia and nephritis are more frequent following ether, though this view is not accepted by all investigators. I believe we can all agree that there is an element of danger in any anesthetic, but that the danger of sudden death from undiscoverable cause occurs more frequently from chloroform. In fact sudden death from ether is a rare occurrence. If we now eliminate the small percent of patients in whom ether is positively contraindicated and choose the anesthetic with the one thought as to which anesthetic presents the minimum risk to the patient, ether will be the indicated agent in the vast majority of cases.

Having selected the anesthetic most suitable to the patient, the anesthetic risk may be reduced further by the selection of an administrator of skill and judgment. I believe that if ether is the anesthetic of choice, and it is administered by a capable anesthetist, the risk of a fatality during the anesthetic state is so remote that it needs little or no consideration.

It is reasonable to believe that any method that will decrease the amount of ether inhaled during an operation will decrease the post-anesthetic danger. The first consideration in this respect is the anesthetist. Doctors who are familiar with patients prior to operation know that in most cases the fear and dread of the anesthetic far exceeds fear of the operation. A person in the grip of this fear will resist the anesthetic, unconsciously fighting against it, and require a large amount of the drug to produce surgical anesthesia. If this fear of the anesthetic can be allayed, the quantity of ether used during the first and second stages of etherization will be lessened materially. This is not a theory but a fact I have observed repeatedly, and I believe will be substantiated by all anesthetists.

It is unfortunate that the anesthetist is frequently a stranger to the patient and is first brought into the patient's presence shortly before the administration, thus being placed at a distinct disadvantage. If the administrator is able to gain the confidence of the patient it will go far in overcoming the nervousness and dread of the anesthetic. It is rather difficult to obtain the proper relation that should exist between patient and anesthetist when they are unknown to each other until shortly before the anesthetic is to be given.

At least a few minutes should be taken to explain to the patient the sensations experienced during the first stage of etherization, instructing him or her how to breathe and to realize how little danger there is from the anesthetic. During the first stage much may be accomplished by talking to the patient and especially concerning the safety of the anesthesia. I believe it was Murray who said that many patients could almost be talked to sleep. But if there is a place to talk during etherization there is also a place to act, a time when the anesthetic must be pushed. Only experience will teach when this point has been reached and it is of the utmost importance that the administrator know this, otherwise the patient is kept in an excited, semi-anesthetized state for an indefinite time, the operation delayed, and the quantity of ether inhaled increased far beyond what is necessary. Surgical anesthesia having been obtained, the object is to keep the patient relaxed on the smallest quantity of ether possible, and again it is the skill and experience of the anesthetizer that accomplishes the most satisfactory results.

Second in importance to an experienced administrator in producing and maintaining surgical anesthesia on a minimum quantity of ether is the hypodermic use of morphine and atropine prior to the administration. Of course it must be understood that no hard and fast rule can be laid down for the use of these drugs as a preliminary to the anesthetic; each patient coming to operation must be considered individually and idiosyncrasies taken into account, but after eliminating the cases in which morphine and atropine are contraindicated we have an overwhelming percent of patients who will derive a marked benefit from their use, principally because the amount of ether inhaled is less in cases so treated. A brief review of the therapeutics of opium will, I believe, convince the most skeptical of its value in the matter under discussion. I have spoken of the fear so constantly present in patients coming to operation and the part it plays in the administration of an anesthetic. Fear is an emotion of dread. All emotions are agitation of mind or excitement of sensibility depending on nervous reactions. Hare says the dominant action of opium upon man is to produce nervous sedation when given in small doses. In this respect morphine is positively indicated as a pre-anesthetic adjunct. Therapeutic doses of morphine have no effect on the circulation, and if any on respiration act as a feeble stimulant. As to atropine, it stimulates the cardiac muscle and is also a stimulant to the respiratory center, but its chief value when given prior to ether administration is its actions on secretion. Ether causes a free secretion of mucus in the fauces: this excess mucus and saliva soak the gauze of the inhaler which interferes with the proper inhalation of the anesthetic. To a certain extent this excessive secretion can be controlled with atropine. Therapeutically, therefore, we find valid reason for the use of morphine and atropine as a pre-anesthetic measure, and from personal observation and comparison of many cases in which these drugs were and were not given I feel I can state positively that there is a practical benefit from their use in that they shorten the first and second stages of etherization and maintain surgical anesthesia on a reduced quantity of ether.

Let us now consider the use of short term anesthetics in conjunction with ether, and in this respect I wish to make special reference to ethyl chloride. The use of nitrous oxide, ethyl chloride or any short term anesthetic as a preliminary to ether have this to recommend them: that they eliminate the unpleasant first stage of etherization, shorten the second stage and thus lessen the quantity of ether inhaled. All of

which is of distinct advantage to the patient. Of the short term anesthetics ethyl chloride has proved eminently satisfactory for many years in my work, not only as a preliminary to ether but in selected operative cases of short duration, replacing other anesthetic agents entirely. In more than five hundred administrations of ethyl chloride no untoward effects have been noted. It was used in conjunction with ether a comparatively few times, but proved its worth by overcoming the first and shortening or eliminating the second stage of etherization. The large percent of my experience with this anesthetic has been for dental operations, though I have used it repeatedly for short operations of various kinds. The ages of the patients have varied from five to seventy years. Very few dental cases had any preliminary preparation for the anesthetic, yet there were no cases of cyanosis nor any change noted in the circulation. No case showed danger symptoms during the administration, and recovery was rapid. Few patients were nauseated, and in this respect it must be remembered that more or less blood is swallowed during dental operations and that frequently the anesthetic was given shortly after a hearty meal. A stage of excitement is almost unknown; complete anesthesia is reached in an average time of one minute, and with inhaler removed the available time for operating is from one to one and a half minutes. For children it seems a perfect anesthetic for short operations, as the odor is pleasant, it causes no throat irritation, no cyanosis or undue bleeding, and the recovery is rapid and complete. You do not get the muscular relaxation from ethyl chloride you do from ether, but there are many operations of short duration, five to ten minutes, where it can be employed successfully. On one occasion I kept a patient anesthetized with this agent seventeen minutes, with rapid recovery and no untoward effects during or following the anesthetic. The inhaler that has given me the best results consists of a rubber face piece connected to a right angled piece of metal tubing to which is attached a rubber bag. An opening at the angle of the tubing permits the spraying of the ethyl chloride directly into the bag. The air is controlled by closing this opening with finger or thumb. The spray of ethyl chloride is the best form to use. Ethyl chloride presents several advantages over nitrous oxide and other short term anesthetics, not the least of which is the portability of the inhaler and the anesthetic agent, all of which can easily be carried in a coat pocket. The simplicity of its use, coupled with its safety and the fact that it is adaptable to certain operations of short duration makes ethyl chloride a valuable member of the anesthetic family.

To sum up: The anesthetic risk can be lessened by the proper selection of the anesthetic suitable to the individual case; the anesthetic should be given by an experienced administrator; morphine and atropine are indicated and should be used except when there exists some positive reason for withholding them; the use of a short term anesthetic as a preliminary to ether; the use of ethyl chloride to the exclusion of other anesthetic agents in selected cases where it is suitable.

ACIDOSIS

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The term acidosis was originally applied to the abnormal metabolic state in which there is an excess of acetone, diacetic acid and beta-oxybutyric acid in the blood whose normal carbon dioxide carrying capacity is thus interfered with. Since then other acid bodies have been found in the blood in abnormal states and the term now usually includes all those abnormal states in which there is an unusual production of acids or in which there is an excessive retention of acid bodies in the blood. The condition in which carbon dioxide, the anhydride of carbonic acid, accumulates in the blood in cases of cardiac and respiratory failure is usually not included in the term acidosis. A more accurate definition of acidosis is the bodily state in which the capacity of the plasma for carrying carbon dioxide is reduced below 50 volumes percent. While it is customary to speak of acid bodies in the blood yet as such they do not exist. The blood in life is always alkaline and as rapidly as acids are produced by normal and abnormal metabolism they are neutralized by the alkalis of the blood and excreted by the kidneys. Death usually occurs before the hydrogen ion concentration of the blood reaches neutrality or pH7. Acids administered to dogs experimentally cause very rapid death when the pH reaches 6.9. Diminished alkalinity describes the condition more accurately so far as the chemistry and physics of the condition is concerned, but it is not so expressive of what is occurring as the term acidosis.

While acidosis is usually thought of as a condition of the blood and more particularly of the plasma, yet as all the tissues of the body are bathed and saturated by the plasma the condition of acidosis is found throughout the body generally. It is probably more accurate to say that the acids of catabolism are formed in the tissues and are carried away by the plasma.

Among the laity and among not a few physicians the condition of acidosis is referred to as a pathologic entity and to state that a patient is suffering from acidosis serves as a satisfying

diagnosis. Acidosis, however, is only a symptom of certain clinical entities. Often it is the most important symptom and one to be combatted vigorously. It never constitutes a diagnosis by itself any more than hyperpyrexia can be termed a diagnosis.

The substances concerned in maintaining alkaline blood are sodium bicarbonate, $NaHCO_3$; disodium hydrogen phosphate, Na_2HPO_4; and proteins. By far the most important of these is sodium bicarbonate. In normal metabolism carbon dioxide is the most common acid produced. It is loosely held in solution by the alkaline blood and as the latter passes the pulmonary capillaries carbon dioxide escapes into the alveolar air. When other acids are present, and they always happen to be stronger than carbon dioxide, they unite with the plasma bicarbonate and so interfere with the carbon dioxide carrying ability of the plasma. Carbon dioxide consequently accumulates in the tissues and as one result of this the respiratory center of the medulla is stimulated and forced respirations occur. The attempt on the part of the organism is to get rid, as rapidly as possible, of the little carbon dioxide that can be carried by the plasma by means of increased pulmonary ventilation. By this process more air passes in and out of the lungs and that coming out contains less carbon dioxide than in the case of normal breathing and metabolism.

The increased respiratory effort, or hyperpnea, just referred to constitutes the one characteristic clinical sign of acidosis and that is present only when the condition is fairly well advanced. "The only symptom that may be considered positively pathognomonic of acidosis is hyperpnea or deep breathing, the so-called 'air hunger' of Kussmaul, the cause of which has already been explained. The breathing of acidosis is deep, it is not usually increased in rate, and differs markedly from the shallow, rapid breathing of pneumonia or the labored breathing of obstruction. It is pauseless and though the several inspirations may vary in depth so that a modified Cheyne-Stokes respiration may be present, in general the excursions of the abdomen and thorax are nearly the same with succeeding respirations. The most striking is the amplitude of the respirations and the distinct effort with which they are accomplished. They are heaving, the chest rises and falls with each respiration and often the accessory muscles of respirations are brought into play." As the blood is well aerated and the hemoglobin intact, "There is no cyanosis except in the presence of cardio-respiratory disease. A cherry-red color of the lips is occasionally observed but is of little diagnostic value. Drowsiness may be seen as an accompaniment of acidosis due to acetone bodies. Vomiting is not a symptom of acidosis." (Howland and Marriott, 1918.)

The acids concerned in the production of acidosis and the conditions in which they are found are as follows:

1. Acids of the acetone group, CH_3-CHOH-CH_2-COOH, beta-oxybutyric acid, CH_3-CO-CH_2-COOH, diacetic acid. CH_3-CO-CH_3 is the formula of acetone. Each of these may be successively formed from the preceding by oxidation. There is much evidence to show that beta-oxybutyric acid may be formed from diacetic by the reverse process of reduction. It is universally conceded that the two acids are results of fat and fatty acid catabolism (Wells, p. 550) and perhaps of protein catabolism. They are formed when the ability of the body to handle carbohydrates breaks down as in diabetes or when no carbohydrates are present as in cases of starvation, etc. They are frequently found after anesthesia, perhaps as result of the coincident restriction of diet as much as to the specific effect of the anesthetic. Acetone acidosis is also found in the toxemias of pregnancy, in infantile marasmus, in cyclic vomiting (even aside from the lack of food caused by the vomiting), in Asiatic cholera (Sellards and Shaklee), in inanition and cachexia. It is particularly common in children, disorders in them resulting in acidosis which would not cause it in adults. More common than acidosis in children is acetonuria and acetonemia without accompanying acidosis.

2. Lactic Acid. This is one of the normal products of catabolism. It is found to excess in severe muscular work, in convulsions, in acute destruction of the liver as in phosphorus and chloroform poisoning, and in severe diarrhea in infancy (Marriott, 1920). Lactic acid is one of the products found in methyl alcohol poisoning and along with formic acid made at same time constitutes an important form of acidosis (Harrop and Benedict). Lactic acid is also found in excess in the toxemias of pregnancy (Wells, p. 559).

3. Formic Acid. Probably the most important condition in which formic acid occurs in excess in the body is in methyl alcohol poisoning. Its relation to methyl alcohol is seen by a comparison of the formulas of the two, methyl alcohol, CH_3OH, plus O_2 yields formic acid, HCOOH and water H_2O. Along with the lactic already referred to the acidosis caused by it constitutes an important symptom of wood alcohol poisoning and one to be combated by alkali therapy (Harrop and Benedict).

4. Acid Sodium Phosphate, H_2NaPO_4. This acid salt is normally excreted by the kidneys and is one of the chief factors in rendering the urine acid. One of the normal renal functions is excretion from the alkaline blood of this acid salt. In nephritis this function is impaired. In severe

nephritis, acute or chronic, acidosis of sufficient degree to cause death may result (Chase and Myers).

5. Unknown organic acids such as have been found in lobar pneumonia (Lewis and Barcroft, Palmer).

6. It is possible that ingestion of large quantities of mineral acids such as hydrochloric or sulphuric or of acid salts, or of certain organic acids may yield an acidosis similar to that brought about in experimental animals by intravenous or enteric administration of such substances. Such cases of acidosis in man must be comparatively rare and unimportant from a practical standpoint. Most of the organic acids and their salts after entering the body become oxydized to carbonates and as such increase the alkalinity of the blood.

The methods of diagnosing acidosis aside from the symptom of hyperpnea are essentially laboratory procedures. Two of them are sufficiently simple to be termed clinical or bedside methods, but the others require considerable apparatus and skill.

CLINICAL METHODS:

1. Estimation of the carbon dioxide tension of the alveolar air. As the amount of carbon dioxide in the lungs is proportional to that carried by the blood the determination of the amount in the lungs or alveolar air is a good index of the state of acidosis. Several methods for doing this have been devised. Probably the simplest and one clinically satisfactory is Marriott's colorimetric method by bubbling air exhaled into a rubber bag through a standard colored solution and noting change of color due to CO_2 (Marriott, 1916). (Instrument obtainable from Hynson, Westcott & Dunning, Baltimore.) Other methods of more complexity are those of Fredericia and of Haldane. In health the carbon dioxide tension of the alveolar air is 45 to 40 mm.; 35 to 30 mm. represent mild acidosis, 20 mm. indicates a dangerous degree of acidosis; in coma due to acidosis it may be reduced to 10 mm.

Closely allied to this method of determination of the alveolar air carbon dioxide is the one recently described for determining the amount of acetone in the expired air (Higgins). It should be noted, however, that there may be marked acetonemia and acetonuria without a corresponding acidosis.

2. Sellards' alkali tolerance test. In normal adults the ingestion of 5 to 10 grams of sodium bicarbonate is sufficient to render the urine alkaline. In cases of acidosis 4 to 10 times this amount may be required. This test is very easily applied and in addition to being a test of acidosis it is an excellent therapeutic measure (Sellards, 1912).

Methods by examination of urine: These all depend upon a normally acting kidney. They are comparatively easy to make, but show less accurately the true state of acidosis than do examinations of the blood.

1. Detection of acetone bodies, acetone, diacetic and beta-oxybutyric acids. Acetone and diacetic acid tests are readily done as a routine on all urines. One of the simplest and cleanest methods of testing for acetone in urine is to add to 5 cc. of urine in a test-tube ½ cc. of a 2 percent solution of sodium nitroprusside in a 1 percent solution of acetic acid. (It is unnecessary to use weights and measures in making this solution or doing the test. The nitroprusside-acetic acid mixture will keep several days.) The urine and nitroprusside mixture is then overlaid with strong ammonia water. A purple ring denotes acetone. Acetone in the urine is only suggestive of acidosis and should be followed up by other tests. Acetonuria without acidosis is of very common occurrence in children. Gerhardt's well known ferric chloride test (Stitt, p. 581) for diacetic acid is simple and good but open to two sources of error. In certain alkaline urines the reaction may appear (Maxwell) while a purplish red color is produced after the ingestion of salicylates, such as the much-used aspirin of today. In case of doubt the urine should be boiled, a procedure which will expel the diacetic acid but not the salicylates, and then tested in the usual manner. The test for beta-oxybutyric acid while not difficult is longer and not adapted to routine examination of urines.

2. Determining the degree of acidity of urine. In normal urines the degree of acidity increases as the specific gravity increases. Multiplying the last two figures of the specific gravity in normal undecomposed urines gives approximately the number of cubic centimeters of normal alkali needed to neutralize 100 c.c. of urine, phenolphthalein indicator. High acidity in urines of low or normal specific gravity is somewhat suggestive of acidosis. A more accurate method of determining acidity is to estimate the hydrogen ion concentration of the urine (Anon, p. 243). One of the defenses of the body against acidosis is the formation of ammonia and the neutralization of the acid by the ammonia. The acids are then excreted in the urine not as such but in combination with ammonia. Consequently systemic acidosis may be marked while the urinary acidosis is essentially normal.

3. Estimation of the amount of ammonia in the urine (Stitt, p. 578). Normally about 0.7 gram of ammonia is excreted by the urine daily. In certain conditions of acidosis the amount of ammonia in the urine may reach a total of 5 to

10 grams per 24 hours. The percent of ammonia to the total N in the urine may be increased from the usual 3 or 5 to 30 or 50 percent. The urinary ammonia is comparatively easily estimated by several well known laboratory procedures, especially by the aeration method (Anon, p. 228). The formation of ammonia in the body in cases of acidosis is of much interest as it represents a special defense against that condition. This special defense is most marked in the acidosis due to diacetic and beta-oxybutyric acids. In other conditions of acidosis ammonia formation is almost negligible, and is essentially lacking in the acidosis of nephritis. The estimation of the ammonia in the urine is usually much simpler than the estimation of the acid bodies and yields more valuable information.

Methods by examination of the blood. Just as in diabetes and nephritis examinations of the blood yield information of more value than the more frequently made examinations of the urine, so in acidosis blood examinations yield more valuable information than urine examinations.

1. By far the most important of these methods and one by which the degree of acidosis may be accurately stated is that in which the carbon dioxide combining power of the plasma is determined by the well known and comparatively easily used Van Slyke apparatus (Van Slyke, Stitt p. 274, Anon p. 264). The test itself is spectacular as one sees the carbon dioxide escaping from the plasma into a graduated tube by the addition of sulphuric acid. It also shows graphically what happens in the body when the carbon dioxide is displaced by acidosis into the tissues. Normally 100 c.c. of plasma will hold 80 to 53 volumes of carbon dioxide. In mild acidosis without symptoms the plasma will hold 53 to 40 volumes, in moderate acidosis with symptoms referable to the acidosis 40 to 30 volumes, and in very severe acidosis 30 volumes and less. The lowest values in fatal cases are about 20.

2. A less accurate and less spectacular method than Van Slyke's but using simpler and less expensive apparatus is Levy, Rowntree and Marriott's device for determining the hydrogen ion concentration of the serum or plasma by a colorimetric method. pH 7.6 to pH 7.8 is normal while in conditions of acidosis figures of pH 7.55 to 7.2 are obtained. pH 7.0 is the point of neutrality. In one of their experiments on dogs by intravenous injections of hydrochloric acid pH 6.9 was obtained, the animal dying about 20 minutes later (Levy Rowntree and Marriott, 1915).

3. A similar method is determining the alkalinity of the plasma by microtitration (Stitt, p. 568).

4. Sellards' serum test. One cubic centimeter of serum is added to 25 c.c. of neutral absolute alcohol, shaken and the whole filtered. A drop of phenolphthalein solution is added and the whole filtrate evaporated to dryness. Normally a reddish purple color develops; in severe acidosis, there is a faint pink color or none at all, but the addition of a drop of water brings out a pink color. In extreme acidosis water fails to bring out the color (Sellards', 1914).

The chemistry of acidosis points the way to treatment. The therapeutic substances employed are dextrose, alkalis, principally sodium bicarbonate, and water.

In acetone-body acidosis when the fats and possibly the proteins are being oxidized to diacetic and beta-oxybutyric acids and the available sugar is apparently gone the administration of dextrose is indicated except in the acidosis of diabetes in which condition the body's ability to handle dextrose is broken down. When the alimentary tract will tolerate it dextrose may be given by mouth in 5 to 10 percent solution about as frequently as liquid nourishment is usually given. If not tolerated by the stomach it may be given by rectum in 5 percent solution in bulk or by the drip method. The most certain method and one often yielding brilliant results is by intravenous injection of a 10 percent solution, 50 c.c. for a very small infant, 500 or even more for an adult. The dextrose solution should be filtered and autoclaved. It should be administered slowly so as not to place a sudden strain on the circulatory apparatus.

In acidosis from any cause alkalis are indicated, but in the acidosis of diabetes the results are not satisfactory. Sodium bicarbonate may be given by mouth in doses of 1 to 4 grams at a time. It may be given rectally as in the case of dextrose. Intravenously it often gives brilliant results in cases of extreme acidosis. For intravenous use a 4 percent solution is employed. 50 to 100 c.c. for infants, 200 to 300 c.c. for larger children and 500 c.c. for adults. It should be prepared by adding the dry sodium bicarbonate weighed out on sterile scale pans, handled with a sterile spatula, and adding it to freshly distilled and sterilized water. After once prepared it cannot be sterilized as in heating one molecule of carbon dioxide is liberated and the irritating more alkaline sodium carbonate results. Dry sodium bicarbonate is essentially sterile. Its solution does not keep, but breaks down spontaneously into the carbonate. It may be combined with the dextrose solution and the two substances given together. Acidosis is of such common occurrence among children that it is often well in treating acutely ill children to anticipate acidosis and administer sodium bicarbonate or the more palatable sodium citrate.

which finally appears in the blood as sodium bicarbonate, as a prophylactic measure. When the urine has become alkaline or has an acidity so low that 100 c.c. may be neutralized by about 10 c.c. of normal alkali, the alkali therapy should be lessened or discontinued.

In acidosis associated with diarrheas and vomiting the body usually becomes rapidly dehydrated and the kidneys unable to excrete properly, water is urgently needed. It should be given liberally by mouth if possible. If not it may be given rectally in the form of salt solution. In urgent cases salt solution may be given intravenously in about the same quantities as for the dextrose and alkali solutions already mentioned. In infants up to 300 c.c. may be given intraperitoneally by means of a short-beveled needle inserted in the midline below the umbilicus or just outside the rectus muscle at the level of the umbilicus in the left side to avoid puncture of the liver. The buffered solution of Ringer (sodium chloride, 0.7 percent, potassium chloride 0.03 percent, calcium chloride 0.025 percent), is better than the usual salt solution (Howland and Marriott, 1918; Marriott, 1920).

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"THE PHYSICIAN"

RELATION OF THE PROFESSION TO SOME DISEASE HABITS*

By

FRANK B. WYNN

INDIANAPOLIS, INDIANA

That we are creatures of habit is a most trite but true saying. The lower animals are governed by it even more than we. The small brained swine respond with regularity to the feeding hour, more from habit than hunger. The horse soon learns to turn at the end of the corn-row, without even being directed.

All habits are physiological in the manner of their production and development. In the main there occur the afferent impulses awakening central nervous reactions and giving rise to efferent impulses which bring about peripheral reaction of gland, muscle or tissue. Closely related parts and centers are affected, but to a lesser degree. The physiological fact to remember is that there are certain paths of conduction and definite centers of response which become more or less permanently changed from the traveling or impact of these impulses. Of all points of contact and stress that which probably suffers most is the nervous center. Here then is where we must look for the chief lesion arising in habit formation. The processes of induction may vary, but the method of physiological development will be the same whether it be the liquor habit, the opium habit, postural habit or the habit of constipation. If we keep constantly in mind the truth, proved by reasoning and clinical observation even if not readily demonstrable in the laboratory, that the chief point of injury in habit formation is the nerve center, we can realize more easily why habits are difficult to eradicate; and if we would pursue the wiser course, how very important that the profession, collectively and individually, should take every means possible to prevent habit formation.

When mention is made of habit formation in relation to medical practice thought almost invariably centers upon chronic alcoholism or drug addiction. One purpose of this discussion is to show that the subject has a vastly wider application.

A few years ago when alcohol was king of the habit-forming realm, its victims were found by scores in the larger public institutions. Although, as practitioners, we may chafe under the curtailment of our rights and liberties in the matter of prescribing, the convincing fact stands out and compels admission of the truth that prohibition has swept from medical sufferers a great host who came in the wake of

*Sixteenth of the series of articles by Dr. Wynn appearing regularly in THE JOURNAL.

alcoholic abuse. Now their number is almost negligible and the subject scarcely requires mention in this essay.

In a similar manner, opium and its derivatives under the restrictive influence of the Federal law, have shown a wholesome tendency to conservatism in their administration by the profession. And most fortunate for the chronic sufferers themselves, the purchase of habit forming drugs by the patient upon his own initiative has been made almost impossible. Quack remedies which formerly contributed largely to the ranks of opium habitues are now put under ban. The outcome of this evolution in wiser opium administration is that whoever now acquires the opium habit does so chiefly through thoughtless administration by practitioners who give these remedies over too prolonged a period or for conditions which might be treated even better by other remedies and measures.

The development of the opium habit is so insidious in its onset and fearful in its consequences, that every practitioner should early in his career lay close to his heart the grave moral obligation placed upon him in this matter. Toward no one is this more necessary than the physician himself. The stress of his life, its irregularities, his acute mentality and conscientious responsiveness to the physical and mental troubles of others, make a heavy drain upon his nervous reserve. Therefore he becomes good soil for the development of functional nervous trouble with its attendant irritability and insomnia. The soothing anodyne or the sleep-giving hypnotic tides the overworked physician through an ordeal; and then comes another and another trial of strength and endurance calling for temporary support. Before he realizes, he is depending upon these instable props to hold up his nervous equilibrium. For him, most of all, they are not a safe foundation. They crumble and leave his professional career a wreck. Who cannot name among his professional acquaintances a number of such—generally young men of brightest promise. The records of sanatoria and large hospitals show many of these pathetic figures who arouse one's deepest sympathy. Not rarely the picture is made still more touching by the wife who has also been drawn into the vicious habit stream. These uncanny facts are offered not so much in criticism as in exhortation that in the case of our own families we should avoid the use of opium or powerful hypnotics. Where the indications for these remedies exist, put the responsibility of their administration upon a brother practitioner.

The position here set forth is not to be construed as raising any question concerning the extreme value of the opium group of remedies, when wisely prescribed. The service of morphia to surgery is invaluable. In medicine its soothing effect upon pain, its quieting influence on mental apprehension, cardiac distress, and respiratory agitation are but a few of the emergencies in which it offers not merely comfort, but may constitute an important step in curative therapy. Like fire it is a good thing when properly used, but when carelessly employed becomes a consuming conflagration.

In the giving of opium or its derivatives to any patient, every practitioner should at least have very definite rules of caution from which deviation should seldom be made. Prolonged and continuous administration is not to be permitted except for incurable conditions, or in the aged where habit formation is not so readily developed; and even if formed does not hamper materially the physical well-being or social status. Careful account should always be taken of the temperamental peculiarities of the individual. To those of neurotic type it should always be given with the extremest caution. Its use in recurrent outbreaks of hysteria and migrain is unjustifiably bad practice. Other methods may prove less brilliant in the relief of the patient but they will save the doctor's conscience and protect the patient's future. In no phase of medical practice has the profession been more derelict in this particular than in the treatment of dysmenorrhea. The safe and wise procedure in any case where morphia is indicated is to employ the hypodermatic method—either by the physician himself or under competent nurse control. In this manner the quantity and frequency may be safely regulated and withdrawal instituted early enough to insure the patient's best interest.

Almost equal to opium abuse in recent years has been the indiscriminate use of cocaine—notably in the form of sprays to the upper respiratory tract. It too, has developed a tragic group of victims. Although not so hopeless in prognostic outlook as the morphia habit, cure can only be hoped for through prolonged institutional restriction. Not a few of these cases represent the vain attempt to escape from chronic opium narcotism only to find themselves haunted by two demons instead of one.

In sequence from the foregoing are to be mentioned chloral, the milder hypnotics, chloroform and the analgesics. All have their risks in the matter of habit formation and therefore a corresponding obligation upon the physician to observe caution in their repeated administration. Concerning all of them it may be said with truth, that in the beginning they were heralded by enthusiasts, and especially the pharmaceutic houses, as *not* habit-forming drugs. Wider experience by thoughtful and conservative observers invariably proves the contrary.

In the light of these well established facts let the physician in prescribing habit-forming drugs govern his conduct with the utmost wisdom and foresight.

In considering the tobacco habit I wish in the outset to make clear that I do not belong to that group of "reformers" who feel that, having placed alcohol under universal ban, they should now march upon tobacco. Certainly no one can claim, however, that the latter is a food. Nor can argument be massed to prove to the hygienist that waiting rooms, banquet halls or compartments for men laden with tobacco smoke are wholesome. To the aesthetic minded, who dare contend that radiators, hotel lobbies, and railway coaches are made beautiful by tobacco bespatterment? And to a refined olfactory sense which delights in the perfume of roses or the aroma of spruce forests, is there any divine suggestion in the fetor of a tobacco breath—most of all the nauseating, sweetish odor of the cigarette fiend?

In spite of these criticisms I am compelled to admit that with the vast majority of men, who are users of tobacco *in moderation,* it is a mental solace and comfort. Oftentimes to the chronic insane it is a real boon. What institution worker has not seen the restless and unmanageable back-ward patient made calm and content by tobacco? Many are the husbands, grouchy and irritable from the day's annoyances, who are calmed or sweetened into companionability at the fireside by a pipe or cigar. And who that uses it moderately will not bear testimony to its helpfulness in mental pursuits? How often one observes the thinker, writer, student, or dreamer about to tackle some difficult problem first light his pipe or cigar and then proceed with greater confidence in the accomplishment of the task. What is there about smoking that coordinates and gives momentum to mental processes? It is not the technique of the act. Rather it is a state of mind induced by the mild tobacco toxemia, which shuts out the irritating and irrelevant winds which ruffle and divert the currents of thought. It is near akin to the state of mind into which we lapse with the first approach of sleep at night; or early in the morning when half-waking—times when we frequently find the solution of our problems with startling amazement. In similar manner the smoker sails into a harbor of quiet and safety where he feels confident of himself, and gives expression unhampered to the best there is in him.

Lastly what an unfailing touchstone is tobacco of good-fellowship. It introduces, democratizes, softens old asperities, warms the cockles of the heart and promotes universal brotherhood.

But let not this encomium of the weed deter us from attack of the real and serious harm which may result from tobacco abuse. Every insurance company recognizes the injurious effect of tobacco toxemia upon blood pressure and cardiac rythm, through nerve-center impairment. Recent fashions in smoking are rendering more acute and widespread the evils of tobacco abuse. First of all the World-war has enormously increased the habit of cigarette smoking. That it is more frequently followed by harmful results than other forms of tobacco consumption, is for two reasons—first the tendency to more continuous indulgence; and secondly the prevalent habit of inhaling the smoke deep into the lungs and exhaling it through the nostrils. Carried to excess this sets up a diffuse catarrh of the whole respiratory tract. It is the "smoker's sore throat" which we used to see, projected upwards and downwards more or less over the whole respiratory tract. The protective, ciliated epithelium becomes damaged, making the whole respiratory system more vulnerable to infection by inhalation. From the structural changes of katabolism there is undoubtedly a great deal of protein, autogenous toxemia. This is the most rational explanation of the sallow complexion so frequently observed in those given to excessive consumption of cigarettes.

But the most disastrous inroads of cigarette abuse are to be found in the central nervous system. Out of his sex-egoism and false conception of manliness, the mind of the youth turns naturally to the cigarette for experimentation and exploitation—justifying himself in part by the fact that the individual cigarette contains but a small amount of tobacco. His growing and impressionable nerve centers react powerfully to the toxemia and soon come to demand its sustaining and soporific influence. Not only is there soon acquired the tobacco habit, but curiously there arises in not a few cases loss of inhibitory, moral control. Among high school students I have observed not rarely in those who are cigarette smokers a loss of mental acuteness but more conspicuous still a weakening of moral stamina—the evil fruitage of tobacco excess. Hand in hand with this failure is apt to arise an overweening sex egoism, often with shocking tendency to sexual eroticism and degeneracy. Not a few lads have I known of ideal heredity, with every advantage of home training and education, well endowed, who have started down the immoral toboggan with cigarette smoking.

Follow an individual of this type, or the older, hardened "cigarette fiend" through a grave, acute or chronic infection. Note the saffron-tinted fingers, the tremorous hand, the nauseous, sweetish odor which permeates the room, and

the imperative and constant demand of such a patient for more cigarettes, and deny if you dare the heightened gravity of prognosis—made so by his habit. Is it not incumbent upon the profession at this time to more frequently call attention to the ominous significance of these things?

Very recently cigarette smoking has developed a new phase of great seriousness in my judgment. More as a matter of fashion than as part of woman's enlarged liberty of rights and conduct, smoking is becoming quite the thing among the "smart set". And now like other fashions it is insidiously but surely extending to all social classes. Upon three different occasions within recent months I have seen neatly dressed girls in their teens, seated in public places with their parents, brothers, sisters and sweethearts, smoking cigarettes. Is the fashion to become universal without the profession of medicine raising a finger to point out the dangers? The generally recognized emotional instability of the female sex indicates a type of nervous constitution in which chronic cigarette toxemia is more likely to act with disastrous results than in men. Young women, therefore, who acquire the habit are likely to manifest even more frequently than men, loss of intellectual acuteness, a weakening of moral sense, and impaired general nutrition. Loss in beauty will necessarily accompany the impaired physical, mental and moral tonus.

Were I asked the most common habit of our modern civilization, I should answer without hesitancy, chronic constipation. The "American Army of Constipation" is made up almost entirely of women. It is one of the physical vices begotten of wealth, luxury, ease and physical indolence. Our pioneer mothers were not so generally afflicted. The habit is less common among European than American women, because more of them perform manual labor which calls into action the general muscular system—notably the muscles of the abdomen. Women of the English middle classes engage quite generally in open-air recreation which combats the tendency to chronic constipation. Americans are more prone to the condition because of social habits and customs. Coarse foodstuffs which offer bulk for the bowel to labor with are tabooed in good society as vulgar and common. Instead knick-knacks and delicacies which pamper the appetite and weaken intestinal effort are cultivated. The bowel muscle like other unused musculature becomes soft. Thus insufficient or improper food residue within the lower bowel, indolent habits of body or improper exercise, and failure to observe the habit of regularity in responding to bowel stimuli, result in constipation. Recourse is had to artificial measures acting directly or indirectly upon the defecation center. A purge, a saline, a laxative is called upon to do what proper physiological management, from day to day, should have accomplished. More and more the individual comes to depend upon artificial help. Although primarily a hygienic and dietetic abuse, it becomes ultimately and chiefly a cord change. The defecation reflex takes on a plan of action which calls regularly for its stimulus. A horse trained to go by the whip will not hasten his lazy pace until goaded. So the cord center in chronic constipation comes to demand its accustomed stimulus before getting into action.

Contributing very largely to the almost universal habit of constipation amongst women are the quacks and mercenary minded of the profession—appealing to the public through "cascareens", "Aloettes", "Nature Remedies" and the like. Nor should we in this connection fail to acknowledge our own responsibility. Too often we yield to the layman's demand for a remedy pursuing the easier if the lazier course of prescribing cascara, an aloin compound or other laxative. The larger duty in such cases is to lay down with emphasis the physiological law, of proper exercise and diet. It is for us to inculcate publicly and privately, that instead of chiropractic titillation of the spinal nerves, osteopathic pummeling of the abdominal muscles and bowel, or the repeated use of laxatives, real, fundamental and lasting progress is made toward a healthful bowel condition, by living the physical, hygienic and dietetic life which will make these measures unnecessary. Is this not a phase of public health in which large responsibility is placed upon the profession? Are we seizing the opportunity and discharging the duty—publicly as well as privately?

Does it not lie within our power to arouse in the feminine world a larger interest in open-air activities—tennis and golf for those who can afford it; hiking and nature study for a large number; floral and vegetable gardening for those who have the facilities—and there are many such; rowing, riding, swimming, athletics, etc.; and last but most important of all, actual participation in the science, art and labor of domestic life. The false conception of modern social life that a "lady" should not work with her hands is pernicious in principle—harmful alike to health and happiness. It would be well for every woman of the day to read Gene Stratton Porter's novel, "Her Father's Daughter," for its wholesome suggestiveness to mind, soul and body. Work, mental and physical, should enter into the program of every life. Not only does it give the satisfying consciousness of duty performed; it yields a return in a more healthful body functioning without artificial aid.

THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION
Devoted to the Interests of the Medical Profession of Indiana
ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.
Editor and Manager

Office of Publication, 406 W. Berry St., Ft. Wayne, Ind.

NOVEMBER 15, 1921

EDITORIALS

REMOVAL OF TONSILS AND TEETH FOR CURE OF RHEUMATISM

Statistics show that there has been a very marked decline in the mortality from acute rheumatism during the last ten years. In a statement concerning this matter, the Metropolitan Life Insurance Company quotes a leading clinician to the effect that the chief causative factor of acute rheumatism is a focus of infection within the body and usually within the head, chiefly within the mouth and throat, and the reduction in the death rate in acute rheumatism is due to the removal of these foci. The tonsils are the chief sites of infection within the head which are accessible for easy removal. Incidentally it may be stated that the number of damaged hearts is lessening as a direct result of the removal of such foci of infection as diseased tonsils and teeth.

However, it is a question if this intensive attention to mouth hygiene and the attempt to remove all foci of infection by extracting teeth and removing tonsils is not going to the extreme. There can be no question of doubt about the part played by foci of infection in any part of the body in producing rheumatism and cardiovascular as well as renal disturbances, but just at the present time it seems the fad, for those physicians who are rather superficial in their study of cases, to pounce upon tonsils or teeth as a causative factor in a large number of diseased conditions that may be due to some foci of infection in other portions of the body. Many inoffensive tonsils and comparatively sound teeth have been sacrificed in consequence of carrying a very valuable and justifiable procedure to extremes. Perhaps dentists have been most at fault, though for the most part they have been encouraged by the members of the medical profession who have insisted that foci of infection about the roots of teeth, with their possibilities of great harm, should be removed, and no doubt this has led many dentists to over-estimate the danger connected with unsound teeth that rational judgment would commend to treatment. The loss of teeth is a serious thing to the average individual, and the recommendation to sacrifice teeth should be given only after a most thorough and analytical examination, not omitting an x-ray examination by a skilled and experienced roentgenologist. The sacrifice of tonsils, when the operation has been done skillfully, is not such a serious matter, even when inoffensive tonsils have been removed, but here again the recommendation to have tonsils removed should be based upon findings which justify operative procedures. A tonsil which some clinicians have termed "juicy" and from which mucopurulent secretion may be expressed, is potentially a source of trouble, *no matter what its size.* On the other hand, tonsils which may be termed "enlarged" but which are and have been free from inflammation, and from which no infective material can be expressed, may be considered reasonably healthy and in no sense a focus of infection.

In an examination of the tonsils mere inspection does not suffice, but the organ should be drawn from its bed by fixation forceps for the purpose of noting its freedom, and it should be squeezed for the purpose of determining whether it contains infective material. Having decided that the tonsils are infected and should be removed, the operation should be done in a skillful manner by one who has had training and experience in that particular work. Bad tonsil surgery is putting the procedure into as much ill repute as bad judgment in deciding when the tonsils should be removed. The whole subject is one for the careful consideration of clinicians, and if we are going to keep it on a rational basis we must use that intelligence which is due every scientific problem if it is to be handled in a sane manner. The lowering of the morbidity statistics as a direct result of removing foci of infection from the body which, in a large portion of cases means ablation of tonsils and improvement of the hygiene of the oral cavity, is deserving of credit to the medical profession, but we ought to be guarded in our endeavors in this direction if we are to prevent our procedures from getting into disrepute through our failure to consider the case from a rational standpoint.

DR. HUGH CABOT'S SOCIALISTIC SCHEMES

DR. CABOT'S REPLY AND OUR ANSWER

In the last or October number of THE JOURNAL we printed an editorial entitled "Dr. Hugh Cabot's Medical Socialistic Schemes for Michigan", with allegations and comments which we believed based upon suitable foundation. To this editorial Dr. Cabot has taken exception, and his reply to the editorial, together with our answer to the reply, are herewith reproduced and are self-explanatory.

November 7, 1921.

EDITOR OF THE JOURNAL OF THE
INDIANA STATE MEDICAL ASSOCIATION,
406 West Berry St., Fort Wayne, Indiana.

My Dear Sir:

Your editorial in the number of October 15th has been brought to my attention. Your reading of a newspaper quotation in which I am alleged to have said certain things is so diametrically opposed to the facts that I make haste to write you on the matter. You have apparently concluded from the newspaper paragraph which I do not recognize, that I am at some time supposed to have advised the admission to the University Hospital of patients who could afford to pay. Now this is precisely the reverse of the position which I have always taken and now take in the matter. The only alteration which has been made in the admission of patients to the University Hospital since my coming here two years ago has been the ruling that patients who can afford to pay a fee shall always be required to do so. I am quite of your opinion that it is improper to use the money of the State for gratuitous service to people not entitled to it and this opinion I have long held and expect to continue to hold. If the University Hospital were to admit patients who could afford to pay, I should be wholly of your opinion. As it does not and as every precaution is taken to avoid this form of pauperism, it appears to me that the criticisms you level at me are not well taken.

My opinions in regard to State Medicine to which you also refer are quite the reverse of those with which you credit me. I have always been opposed to it and my published statements on the subject might readily be obtained. I would refer you to my paper entitled "Compulsory Health Insurance, State Medicine or What?" delivered as the Annual Discourse before the Massachusetts Medical Society, June 9, 1920, at the end of my first year as Professor of Surgery at Michigan. I enclose a copy of the paper in order that you may see that I was at that time violently opposed to State Medicine. I would also refer you to my address at the opening of the Medical School this year which may be found in the November number of the *Journal of the Michigan State Medical Society*. From this, you will appreciate that my opinions have not altered in such a way as to become more favorable to State Medicine and I therefore think that in some way you must have been misinformed in regard to this.

I assume that you would not willingly do injustice to a colleague and therefore I assume that your willingness to condemn and censure me on opinions that I have never held and do not expect to hold is due to misunderstanding. I do not know that this is the proper place to refer to your strictures aimed at me concerning "soft berths", but without going into what may be regarded as a personal question, it is perhaps proper to point out that those looking for "soft berths" do not do so by accepting positions that cut their incomes more than in two. I do not make any claim to credit because I have seen fit to reduce my income by a large amount, but I do think that it entitled me to be free from the assumption that I am looking after my own comfort in doing so. Considering the rather severe way which you have written concerning me, I would ask that you give this at least as much publicity as you have given your editorial.

Yours very truly,
HUGH CABOT, Dean.

November 10, 1921.

HUGH CABOT, M.D.,
Medical Department, University of Michigan,
Ann Arbor, Michigan.

My Dear Dr. Cabot:

Your letter of November 7, taking exception to an editorial in the October number of THE JOURNAL, has been received and noted.

I have not the slightest intention nor desire to misrepresent or misquote you or anyone else, and I am just as much in favor of those things which make for medical progress as you are. Perusal of numerous newspaper clippings covering some of your speeches, and talks with various Michigan medical men who thought they rightly interpreted your attitude, have led me to believe that you favor various schemes which many of us believe not to be to the best interest of the public or the medical profession at large. From conversations with medical men in other states it would seem that I am not the only one holding such opinion. You may have been misrepresented, and perhaps the unfavorable opinion is based upon a wrong interpretation of what you have said and what you have been doing.

You are now the head of a great medical school that, I do not think you will deny, has been guilty—certainly until very recently—of a very loose method of determining who is entitled to gratuitous services at the hands of its Hospital Staff. While I do not think that the pecuniary phase of the question, so far as it affects medical men not connected with your institution, should be overlooked wholly, yet there are broader considerations which justify me in believing that the practice carried on by your Hospital and its Staff, in the final analysis, is detrimental to the public as well as to the medical profession. Knowing that this practice exists, are medical men not justified in interpreting the statement of the Dean of this institution as indicating that the practice is to continue when you say, as you were reported in the Detroit Free Press, and which I notice you do not deny, that "rich and poor should be treated alike"? This statement is reported as having been made by you in connection with a discussion of the subject of admission of patients to the University Hospital.

I had not the pleasure of seeing your paper published in the *Boston Medical and Surgical Journal* until I received a reprint of it from you, and today I have received the November number of *The Journal of the Michigan State Medical Society*, containing your address delivered at the very recent opening of your Medical School. In the latter you acknowledge that there has been misapprehension in the minds of the physicians concerning the attitude of the faculty of your institution, and this necessarily must indicate that there has been occasion for much misapprehension.

Neither you nor any member of the faculty can justly deny that the Medical Department of the University of Michigan has done more to pauperize the community by granting gratuitous medical and surgical treatment to the well-to-do than any one institution or factor in the Middle West. In fact the action has been so flagrant that it has been a common remark among Michigan doctors, as well as doctors in some contiguous states, that it is exceedingly difficult to secure even a very ordinary fee from many well-to-do people for the reason that those people claim that they can go to Ann Arbor and have their work done for nothing, with the hospital charges as their only expense. Furthermore, such practice on the part of your University helps to make it impossible to secure decent remuneration from

the rich industrial organizations or insurance companies for any medical or surgical services rendered, and I do not think that anyone will admit that those organizations should be an object of charity at the hands of the medical profession or even the State.

So far as I know, not a single person has objected to the admission of well-to-do or very wealthy patients to the University Hospital or the Medical School clinics, providing they pay respectable fees for the services, but objection is raised to giving these patients *gratuitous* services, or services at a very nominal fee. The practice followed by your institution is wrong in principle, and in the end is bound to end disastrously. In the discussion of this matter we may overlook the unfair competition of the University, with its injurious effects upon the private practitioner.

Primarily, your University Hospital was established as a teaching hospital, and as such it not only fills a great need but has received a sufficient number of patients for teaching purposes and has furnished skilled gratuitous services to many deserving poor. If for any reason you fear that there will be a dearth of material it seems to me that it would be possible to secure all the cases necessary, and even more than your institution can care for, by appealing directly to the medical men of Michigan to send you one or two cases each throughout the year as you already have suggested in an indirect way. It should be understood that these cases come from the deserving poor, and if others are referred to the University Hospital such cases will be required to pay fees consistent with ability to pay.

Now that you say so, over your own signature, I am willing to believe that you are opposed to the very practices that have made the Michigan University the subject of bitter criticism, and it is unfortunate that you, in your choice of words, have had your real attitude misinterpreted. Knowing what the Hospital of the University of Michigan has been doing, and then have you openly say that "rich and poor should be treated alike" when they enter the University Hospital, makes it appear that you are sanctioning a continuance of the policy that heretofore has existed. It appears that what you wanted to say is that so far as being admitted to the Hospital is concerned, anyone can be admitted, but all are *not* treated alike so far as paying for the services is concerned. If the Hospital of your institution now is charging well-to-do patients fees consistent with their financial circumstances, which seems to be a recent innovation, then that fact should be made known to the medical profession to the end that the justifiable criticism formerly aimed at the Hospital shall cease and deserved cooperation be given you and your confreres on the Staff.

Concerning my reference to the "soft berth" perhaps that is taken in a manner not intended. I knew that you gave up a private practice that netted you more money than you will get out of your present position, though I think you will agree that being the head of a great University, with a fixed salary that enables one to live more than comfortably, is in the minds of many sufficient to counter-balance any loss sustained in giving up private practice. But what about the poor though competent doctor who doesn't have such a position and has his income from private practice unnecessarily and unfairly reduced in consequence of the competition of the University which brings about this discussion?

The term "State Medicine" has been applied rather loosely, but I think it generally is conceded now that by State Medicine is meant providing medical and surgical attention by the State to all who desire it, and this in the end means wiping out private practice wholly, or at least to a very large extent. Your scheme for furnishing "community medical and surgical service" by the members of the Staff of your institution and a selected few outsiders, if I understand it correctly, is a step in the direction of State Medicine in that it paves the way for the operation of a more comprehensive plan directly under the control of the State. Aside from this it starts out by creating a sort of caste in the medical profession, known to the public as such, which is bound to create dissensions and produce vicious results.

I am in favor of everything which tends to improve public health conditions and ameliorate the sufferings of the sick and disabled, but I am opposed to all practices, under whatever guise, that tend to pauperize the community, to stifle individual initiative in medical practice, and unjustly trample upon the rights and privileges of individual members of the medical profession. Hospitals, whether federal, state or municipal, should be open to people, irrespective of social position, but the medical and surgical services should be gratuitous only to the worthy poor, and charged for to all others consistent with their ability to pay. The record of your University Hospital, and your statements which you now say have been misconstrued, are not in keeping with the plan mentioned, and that is the reason for the criticism to which you take exception. The medical men of Michigan have certain inalienable rights, and one of them is the right to practice medicine without the unfair and unjust interference with their efforts to earn an honest livelihood. The University of Michigan has trampled upon this latter mentioned right in not only a ruthless manner but in a manner which true economists believe to be detrimental to the public weal.

I believe that I am safe in saying that practically all of the visionary but impractical if not wholly vicious schemes which tend toward the socializing of medicine owe their origin to medical men, erstwhile leaders in the medical profession, rather than to any lay person or lay organization. It is the so-called leaders, like yourself, who start innovations, sometimes with good intentions but more often with selfish ends of one kind or another in view. Not infrequently the innovations are not for the best interests of all concerned and at such times criticism and opposition is justified. I hope the day has arrived when every right thinking doctor in Michigan, through his voice as well as his vote, will register his opposition to the various schemes for socializing medicine, and that will mean offering vigorous protests to some of the plans that some of us believe you have sanctioned and supported.

Concerning this matter of criticizing the sponsors of detrimental innovations as they affect the medical profession, permit me to quote from a letter to me, commenting upon the editorial to which you take exception, as follows: "There is no position in America so high but that its occupant can be criticized for his words and actions. It has become the habit in America to consider the so-called leaders of the medical profession as immune from criticism by their professional brethren—let us change that habit!"

Very truly yours,

ALBERT E. BULSON, JR.,

Editor of THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION.

P. S.:—In accordance with your request your letter, together with this reply, will be given as much prominence in THE JOURNAL as was given the editorial to which exception is taken.

THE NURSING PROBLEM

A late number of the *Pictorial Review* contains an attack upon the nursing autocracy, by Dr. Charles H. Mayo, in which he offers deserved criticism of the autocratic practice of the majority of the trained nurses in demanding seven to ten dollars a day for services, insisting upon short and regular hours, and in all too frequent instances exhibiting too little of the milk of human kindness in the performance of their duties. He calls attention to the fact that in the vast majority of cases a highly trained nurse is not necessary, and points to the conclusion we already have reached that an advanced standard of preliminary education is unnecessary in order to make a good practical nurse, and that the last two years of a nurse's training is largely superfluous and benefits the hospital most.

While Dr. Mayo very justly contends that there always will be room for the highly trained nurse in specially selected cases, and she always will be in demand by the wealthier classes, yet for the great majority of cases not only is a less highly trained nurse eminently satisfactory but the lower fees of a less highly trained nurse are absolutely necessary for the average run of patients. For people in moderate circumstances, which make up the bulk of our population, the exactions of the modern trained nurse prohibit her employment. As a solution to the problem Dr. Mayo suggests the training of 100,000 girls for sub-nurses. In reality this means accepting girls of ordinary intelligence, not necessarily high school graduates or possessing one or two years of college or university training, and turning them out as practical nurses after a few months' intensive training. It always has been our contention that there is a great field of usefulness for such practical nurses, and that, except in rare instances, the highly trained and specialized nurse, usually unsympathetic and autocratic in her determination to stick to a fixed program as to the kind and quality of work she will do, the number of hours she will work and the pay she is to receive, is superfluous, and a luxury (?) which few can afford and in reality which few care to tolerate except through necessity of having someone to care for the sick.

No doubt Dr. Mayo, who handles the whole subject in an analytical way and offers a solution for the problem, will come in for a good deal of criticism, but nevertheless the discussion of the subject is entirely rational and deserving of thoughtful consideration.

MEDICAL SUPPORT FOR PLAYGROUNDS

In these days of industrial depression more than ever there is need for enthusiastic support from the medical profession for the playground movement in most Indiana cities. In this, as in most questions of preventive medicine, the public is willing to leave the initiative to the doctors, while we as a class are apt to forget the tremendous influence of outdoor exercise upon the future health of our boys and girls because we are "too busy". Credit is due to the few doctors who have found time to interest themselves in behalf of the children along this line, but they are so few in comparison to the number that should obtain as to be almost a negligible factor.

For many years Indiana has boasted of her educational system, but as a matter of fact there is only one city in the whole state that has attacked the school recreation movement in a thoroughly modern fashion, that city being Gary, with its playgrounds of twenty acres or more on each school premise. She not only has the playgrounds, but she puts them to use all day long, in the evenings, on Saturdays, and a part of Sunday. The parents are encouraged to use them in the evenings, either with or without their children, and teachers are trained in organized play in order that the grounds be under competent supervision continuously during operation. For such training in play-supervision teachers are allowed extra salary, with full-time pay throughout the summer. While the Gary school-day is considerably longer than in the average city, yet a two-hour recreation period is made a part of the compulsory curriculum, a feature which of course is entirely unobjectionable to the pupil. The rewards for this intensive training, both physical and mental, have come in the shape of good, robust students who are not only finishing their high school course at fifteen or sixteen but are also sufficiently advanced as to receive credit of from one to two years in any of the standard universities. Contrast these conditions with those that obtain in most Indiana cities wherein a maximum of thirty minutes per day is allowed for recreation on a school yard that usually has the "standing room only" sign out during recess.

When it is recalled that in the recent war over one-fourth of all the recruits examined for the American army were found physically unfit for service, that from six thousand to seven thousand school children of the United States are annually claimed by tuberculosis, and that the average maturity expectancy of the American newly born is only fifty per cent, the urgency of the appeal would seem established. The situation is quite analogous to the more or less familiar tadpole experiment wherein the growth of the individual was exactly proportionate to the size of glass receptacle in which he was domiciled.

Joseph Lee expresses the thought that play is natural not only because it originates in orig-

inal nature, but because it conforms at every moment of the child's life to the genetics of his growth and development. It reflects the neuromuscular co-ordinations established at the time and establishes those that are ready to be formed. It reflects also the various instinctive tendencies (or many of them) as they ripen, and helps to ripen and strengthen them. In short it obeys the self-finding and self-developing push within the child. It also respects the limitations of the child as regards these neuromuscular co-ordinations and psychic motives. Play is childhood's heritage, and the one means by which it can attain its full heritage of symmetry, normality and health of body and mind. Real work is the fulfillment of the great play instincts, in fact it is the highest form of play. All pursuits that justify themselves are play, and work is the function of the great team instinct that is the fulfillment by us in our individual capacity, of the law of the social whole.

In one of his campaign speeches, President Harding once spoke as follows: "I regard play as having no small part in the building of citizenship. I am glad to make a campaign speech about play. Competition in play teaches the square deal. I am making no appeal in this campaign that I will not be willing to have tested by the standards that good competitive sport has set up in all ages and among all men. I want only those behind me who are willing to play the game. We have had too much encouragement given to the men who wanted to cut second base or get something for nothing."

The school playground movement then makes not only for good sportsmanship and hence better citizenship, but for broader and saner physical development for the many rather than the specialized intensive training for the few star athletes who comprise the teams of the more strenuous, competitive athletics and whose hearts become sufficiently dilated as to make them easy victims to any severe infection.

Let the members of our profession lend their support and influence toward establishing bigger, better school playgrounds that may work at full-time efficiency for the greater development of the school children of Indiana.

QUALITY NOT QUANTITY WHEN INCREASING THE MEMBERSHIP IN OUR MEDICAL ORGANIZATIONS

We have been wondering if the American College of Surgeons eventually will not drift into the position of taking in most anyone who has sufficient "pull" of one kind or another to get into the organization without possessing the requirements prescribed. It may be difficult to keep all undesirables out of an organization, but there is no need of encouraging laxness in the consideration of credentials. There are some secret orders to which at one time it was an honor to belong. However, at the present time, when we attend some of the meetings of these secret orders and have not one but several scoundrels walk up and offer the right hand of fellowship and try the "brother" act on us, we are quite undecided as to the value of affiliation with such organizations. A few years ago the American Medical Association sent Dr. J. N. McCormick, of Kentucky, all over this country preaching the doctrine of medical organization and the advisability of admitting practically every licensed physician to the ranks of our regular medical societies. The plea was made that we should take the "off-color" doctors into our medical societies in order to reform them. We took Dr. McCormick at his word and went out into the highways and byways hunting for licensed practitioners to swell the ranks of our local medical societies, and the result has been that we have not reformed the "off-color" members of our profession nor have we improved the character of our medical societies. In reality what we have done is to help establish a dominating crowd in many of our local societies that takes a special delight in voting down any worthy object that comes up for consideration. Whenever a question of ethical importance, or for that matter, almost any question that has the approval of right thinking doctors, is up for consideration, the "off-color" doctors flock to the meetings in droves for the purpose of defeating it. The rest of the year they are conspicuous by their absence, for a scientific meeting is of no interest to them. The American College of Surgeons started out with high aims, but there seems to be a disposition on the part of many of those who belong to the organization to encourage a combing of the field for members, and it is even hinted that the committee on credentials should be lenient. It is very evident that leniency has been shown in many states if all reports are true and we can judge the qualifications of members by their acts.

For years THE JOURNAL has been preaching "quality, not quantity" as a guide in securing members for our medical societies. We have no faith in the proposition that we ought to take in members in order to reform them. A man who is fundamentally right in the beginning remains so, and whenever he starts out on the wrong foot he generally continues to be on the wrong foot throughout his entire career. He may have spasms of goodness, but he generally reverts to the path that is perfectly natural for him to trod. You "can't get blood out of a turnip," and you can't get righteousness out of a doctor who is naturally, in some manner, unclean or unworthy of the right hand of fellowship of respectable members of the medical profession. A man may be incompe-

tent, but he can correct his deficiencies and he should do so before his qualifications receive the stamp of approval. In our humble judgment medical organizations should scan more closely the credentials of those who apply for membership, and this is especially true as concerns those applicants about whom there is a suspicion as to moral integrity.

VALUE OF RADIUM IN THE TREATMENT OF CANCER

At the recent session of the American College of Surgeons, at Philadelphia, the well-known surgeon, Dr. John B. Deaver declared, in an address before the College, that radium had failed in curing cancer in any stage, and in fact he doubted if radium produced *any* beneficial effect. This edict, coming from a man of the skill and experience of Dr. Deaver, created much surprise and comment, ending in a decision of the College to have the matter thoroughly investigated by a committee that was appointed for the purpose. It is unfortunate that a discussion of the subject appeared in the public press, with considerable criticism of the medical profession for having exaggerated the value of radium. It may be that radium is not proving as valuable in the treatment of cancer as some have believed, and yet it will take more than the conclusion of one man, no matter how eminent, to change the opinion of many serious workers and hundreds of cured patients that radium offers much hope of greatly relieving if not absolutely curing many cases of cancer. However, time and accumulated experience will tell the story, and in enabling us to arrive at dependable conclusions an investigating committee such as contemplated by the action of the College of Surgeons will be approved.

LOWERING THE IDEALS OF THE AMERICAN COLLEGE OF SURGEONS

If the American College of Surgeons stands for anything worth while it will not only purge its membership of undesirables but it will demand of its members a stricter adherence to those principles and objects which not only received the approval of right thinking men when the organization was conceived, but which in reality led the same men to become identified with it. We have heard it stated repeatedly, and from appearances with good foundation, that the iniquitous practice of "fee splitting" still continues in various forms by certain men occupying more or less prominent positions in the College. Our contention is that there should be not even a suspicion of wrongdoing in the fee splitting line among those who have obligated themselves morally to abstain from the practice and to strenuously object to it in others. There certainly should be an effort put forth to establish the status of any man under suspicion, and if guilt be discovered then punishment should be swift and sure. The College owes it to itself to do this, and no amount of influence should hamper the work or lead to a camouflage of the findings. What pertains to the practice of fee splitting also pertains to the unsurgical and even criminal methods employed by some noted surgeons in making a surgical operation the excuse for the performance of an abortion, or, permit us charitably to say, making an unnecessary abortion secondary to other surgical treatment.

In no field of human endeavor is an active conscience more necessary than in the practice of surgery in any of its various forms, and that applies equally to the application of the science and to the economic or pecuniary phase of the work. The American College of Surgeons started out with high ideals and is destined to perform a wonderful work in improving the status of medicine and surgery as affecting both the medical profession and the public. The College will fail to perform its function if it deviates a hair's breadth from the plans conceived and adopted as a creed. It can well afford—yes, it is even a duty—to have a day of reckoning occasionally, an inventory so to speak, in determining whether laxness is permitted in living up to the tenets of the organization.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

IT is time to separate the sheep from the goats in this scheme to socialize the practice of medicine. We should quit paying homage to erstwhile leaders who would destroy the medical profession and all its traditions.

FROM all reports much may be expected from toxin-antitoxin injection in the production of permanent immunity to diphtheria. As has been pointed out by the recommendations of the Indiana State Board of Health, all children entering school for the first time should be immunized at once. Susceptibility to the disease may be determined by the Schick test.

BEFORE now we have stated that the hardest fight before us, as medical men, is the fight against some of the erstwhile leaders in our medical profession if we are to preserve the medical profession and its traditions. The attitude of Johns Hopkins University, and the University of Michigan is ample evidence of our contention. Before long it will be a fight to the finish, if annihilation of private medical practice is to be prevented.

SOME of our advertisers are testing out their advertising by offering to furnish free samples of perfectly trustworthy preparations of their manufacture, and we are wondering how many members of the Association will take advantage of the offers. Incidentally we desire to call attention again to the importance of letting advertisers in THE JOURNAL know that you patronize them. It helps the advertisers, it helps us, and, lastly, helps you, for without advertising we could not publish THE JOURNAL.

THE Christian Scientists ought to be in great glee, for a California court has decided that "in the state of California prayer is a lawful means of healing disease". This decision was made following a trial of a Christian Scientist for manslaughter in the case of a child dying from diphtheria, with no other treatment than prayer. If this goes on it will not be long before it will be possible to commit most any sort of a crime and go unpunished if the claim is made that the manner of producing death is a method of treatment.

IF public health officers desire to secure endorsement and support for their work from the regular medical profession there will have to be a little change in their attitude concerning the socialistic schemes which various public health officials are supporting at the present time. We are not going to permit the socializing of medicine if we can help it, and the time is ripe for offering opposition to the support which some of our public health officers and other misguided leaders in our medical profession are giving to some socialistic schemes.

THE Roycrofters constantly are soliciting doctors to subscribe for their periodicals, but considering the off-color of the editorial comments pertaining to scientific medicine, which not infrequently appear in the periodicals made notorious by the late Elbert Hubbard, and considering that any and all kinds of advertising—even chiropractic stuff—appears in this periodical, we hardly see how intelligent and progressive members of the regular medical profession can subscribe for anything put out by The Roycrofters.

ON the twenty-fifth anniversary of *The Laryngoscope* the editor publishes a note of appreciation in which he makes some very pertinent remarks concerning the work of the editor. A long experience in the editorial game prompts us to appreciate the force of one of his paragraphs, and to reproduce it. It is as follows:

> The path of editorial conduct and business management of a medical journal is neither smooth nor strewn with roses. Personal differences, editorial jealousies and contentions, medical politics, financial stringencies, contributors' eccentricities, ethical exactitudes and many other handicaps must be met in dignified and decisive manner, and an editorial management that can run this gauntlet successfully must exhibit strength of convictions and faithfulness to ideals.

THE surgeons are losing out. No longer can Crile, the Mayos and our own excellent Indiana surgeons operate goitres without fear of offending the real wise heads in the goitre curing game, for the chiropracs, according to their advertising, claim that they are curing goitre by "adjustments". A lot of women who were invalids and nervous wrecks before submitting to a thyroid operation by competent surgeons must feel a sense of humiliation to think what dupes they were to have submitted to the knife when a few manipulations of their goitres or other parts of their anatomies would have produced the same results!

IT is reported that the Post Master General has issued an order to the effect that post masters must be in their offices eight hours a day and not absent themselves therefrom longer than one-half hour on weekdays without special permission. It is very evident that someone has been getting on to the fact that most post masters in the larger towns and cities are mere figureheads, that the real work is done by the office help, and oftentimes the morale is sadly deficient as a result of the easy going methods of the chief. There is certainly room for great improvement in most federal offices and the post office department is no exception.

POLIOMYELITIS is on the increase, there being many more cases in 1920 than during the previous year, and this year the number of cases is even still greater. The peculiar feature about the disease is that it appears in isolated cases and does not show any tendency to occur as an epidemic. The majority of the cases are in children, though there is a good percentage of

cases occurring in adults. Paralyses are, in most instances, not severe. The increased prevalence of the disease seems to indicate greater precaution on the part of health authorities in discovering unreported or unrecognized cases and in taking all precautions to avoid an epidemic of serious consequences.

THE bacteriological laboratory of the Indiana State Board of Health makes many examinations during the course of the year and so far as we know no fees are collected for the services. As a matter of fact there is no reason why a fee should not be charged in those instances where the patient is able to pay a fee. In reality the well-to-do should pay for their laboratory work just as they pay for anything else. There is no reason why the State should help to pauperize the community by doing free laboratory work for any who may ask it, to say nothing of entering into competition with hundreds of men who are doing laboratory work as all or a part of the vocation and from which they are making a living.

FOR the benefit of the large number of State Journals that exchange with us we desire to call attention to the necessity of determining where the delegates to the A. M. A. stand on many questions of vital interest to the welfare of the medical profession at large. We have had examples of what some of the leaders in the profession would do to us if they have their way. It is time to know something about the attitude of those whom we send to represent us at the great parent organization which supposedly represents the voice of a very large majority of the medical men in this country. The trouble of it is we sometimes are betrayed, and if necessary, in order to have our wishes respected, our delegates ought to go instructed.

To those authors who may desire reprints of their papers as they appear in THE JOURNAL, we desire to say that the management has nothing to do with the reprint proposition except to employ printers possessing reputation and facilities justifying the opinion that they will take care of the matter in a satisfactory manner. The printers have made a rule to which no reasonable doctor can take exception, to the effect that check in advance must cover cost of any and all reprints. This is no reflection upon the financial credit of any author, but is necessary in order to avoid the annoyance and expense of determining credits and carrying many unnecessary small accounts. All orders for reprints must accompany the corrected proof returned by authors.

A WELL known advertising firm has sent out to many physicians a questionnaire asking about the medicinal value of raisins. It frankly admitted that the information is to be used in helping to advertise the raisins raised and marketed by growers of California. No stamped envelope is inclosed with the request, which shows the "nerve" of some of the advertising agencies in expecting to get something for nothing. Perhaps there will be many physicians who will be silly enough to answer the questionnaire, and it is barely possible that a few physicians who are mentally warped will give raisins the credit of being good for everything from tuberculosis to ingrowing toenail. However, the scheme mentioned is a smooth way to get endorsement for anything that is to be marketed and which may require some endorsement in order to sell well.

AT present the United States has one doctor to 720 persons and Canada has one doctor to 1050 persons. Of course, this ratio is very much greater for the cities. In fact, all cities and towns in the United States have more doctors than are actually necessary, and the same thing is true in Canada. The country districts in both the United States and Canada are suffering for the want of medical service. Doctors, like the majority of people in other vocations, prefer the cities, and flock there even though remuneration is less than it would be in the towns and villages. One of the problems to be solved is how to get competent medical service to the sparsely settled communities. There ought to be enough medical men who like country life sufficiently, and with it a respectable income, to justify locating in the towns and villages for the practice of medicine.

FROM actual knowledge we know that a few of the members of our Association are giving credence to some of the specious claims of pharmaceutical houses concerning the virtues of some of the proprietary preparations of secret formula that have been openly condemned as worthless or nearly worthless by the Council on Pharmacy and Chemistry of the A. M. A. We suggest that doctors go a little slow in accepting the extravagant claims put forth by various pharmaceutical manufacturers concerning preparations that have not been tested and approved in a manner which all men can accept. Usually information may be obtained by referring to *New and Nonofficial Remedies,* and *Propaganda for Reform,* published by the A. M. A., or, in case such books are not available, a reliable answer may be obtained by addressing the Council on Pharmacy and Chemistry of the A. M. A., 535 North Dearborn Street, Chicago, Illinois.

THE nerve of some of the social uplifters is astonishing. Recently a doctor who donates considerable time and skill to the alleviation of the sick poor of one of Indiana's cities was asked for a money contribution by a female soliciting committee for the purpose of supplying medical attention to those of the city entitled to charity. When told that doctors contributed more of real money value to charity than any of the citizens following other vocations, and contributed liberally to other philanthropies as well, the aforesaid female soliciting committee thought the doctor was quite stingy, and they bolstered up their further request for a donation by saying that the services donated to the poor should not be placed on a contribution basis.

Of all of the abuses that members of the medical profession suffer from, that of furnishing gratuitous medical and surgical services to the sick poor is one of the worst, and for which little credit is given, but Lord deliver us from the female soliciting committees that operate without rhyme or reason!

As a species of imposition to which doctors are subjected an example is offered in the request from life insurance companies for detailed and technical information concerning the prospective policyholders who have been the patients of the doctors from whom information is solicited. These reports, requiring time and effort on the part of the doctor, are solicited on the ground that a favor is being shown the patron of the doctor, when in reality it is a favor to the insurance company, and is but another method of securing something for nothing, so commonly practiced by insurance companies when dealing with the medical profession. Of course, the great insurance companies are objects of charity, and they always can find enough "easy marks" in the medical profession to justify the attitude of driving sharp bargains for medical examinations or the procuring of any information that furthers their business interests. As one prominent insurance man said to the editor of THE JOURNAL, "You doctors are a lot of suckers to bite at the bait thrown out by insurance companies, but as long as you are willing to bite why shouldn't we take advantage of it and profit thereby, for we are not in business for our health or for sentimental reasons."

SOME of the officers and employees of our Federal government do not possess even mule sense, let alone good horse sense. An instance of this is the request on the part of a government auditor for a report and detailed description of each treatment given to a veteran entitled to gratuitous services on the part of the government. Inasmuch as the affection was an acute affair, subsided in the usual length of time under the recognized proper treatment for it, and a detailed description of the several treatments would be unnecessary as well as superfluous for the edification of anyone with anything more than half a brain, we fail to understand why Uncle Sam should retain in his employ an auditor who exhibits so little evidence of being worthy of a position of responsibility. The present administration promised reform in the way of removing incompetent office holders, and eliminating the idiotic red tape which surrounds so many government transactions. Up to the present time we have not seen very much evidence of reform, but we hope to see something of it before long, as there is great need for the discharge of a lot of brainless employees who not only hinder the efficient conduct of governmental affairs, but are an extravagant and useless expense to the taxpayers.

ONE of our correspondents complains about the increasing number of six weeks' specialists, and very appropriately remarks that they are about as dangerous as the chiropractors or members of any other pseudo-medical cult who try to do something without knowing how. However, in view of our difficulty in securing a legal standard of requirements for the practice of medicine, it is not surprising that we should have some difficulty in securing some recognized standard for the practice of the various specialties. The more ignorant the general practitioner, the more likely he is to assume responsibility for which he is illy fitted, and he does not hesitate to pose as a surgeon, or specialist of any kind, as long as the patient is willing to submit to his ministrations and the doctor can secure financial gain thereby. While admitting that the man who has had four years of medical training in any of our good medical schools is far more worthy of the confidence of the public than any of the members of the pseudo-medical cults who have little or no training concerning the methods of recognizing and treating disease conditions, yet we must admit that we need a little house-cleaning in our own profession in weeding out incompetents, or perhaps we ought to say in the preventing of incompetents from doing work for which they are not qualified by either experience or training.

THE article entitled "The Truth About Vivisection," by an animal lover, Ernest Harold Baynes, published in the July number of the *Woman's Home Companion*, should have wide distribution among lay persons who may have been influenced by the misleading, untrue and

vicious statements promulgated by the Anti-Vivisectionists. At the conclusion of the article Mr. Baynes says, "In this article I have sought to give facts and allow my readers to make their own deductions. I honestly believe that some of the people who are preparing literature against vivisection are either making statements which they know to be untrue and misleading, or are deliberately closing their minds to the truth in its larger aspect." After showing up the Anti-Vivisectionists in their true light as purveyors of falsehoods and in the distortion of evidence to further their own ends, Mr. Baynes says, "I would not present this case nor would the *Woman's Home Companion* publish it if we did not both believe that it is of the utmost importance to the human race, and to animals as well, that medicine and surgery be allowed to advance unhampered by ignorance, prejudice and sentimentality." Having been thoroughly exposed by a layman, who makes no statement without ample evidence to support it, the Anti-Vivisectionists, through one of their wild-eyed enthusiasts, attempt a retaliation by asking all Anti-Vivisectionists and lovers of animals to boycott the *Woman's Home Companion*. Enough said!

A CERTAIN New York oculist has been writing books and pamphlets, evidently for advertising purposes, in which he makes some very irrational and absurd statements concerning anatomy and physiology of the eye, as well as treatment of eye abnormalities. As might be expected several newspapers and lay periodicals, believing that the statements published emanated from a recognized authority, are publishing some of the erroneous views expressed, very naturally increasing the prestige and probably the financial income of the originator of the ideas. One of the wild tales commented upon by even such periodicals as *Leslie's* and the *Literary Digest* is the one which concerns the recognition of the liar by means of the retinoscope, due to the alleged fact that when a person tells an untruth an error of refraction (myopia) is produced "because it is impossible to state or imagine what is not true without an effort". On the same theory we might suppose that when a person tells an untruth, any of the other involuntary muscular actions could occur. The absurdity of saying that temporary myopia always is produced by an individual who is not telling the truth requires no attention at the hands of those who believe in the scientific soundness of any theory advanced before its acceptance. In fact, the physician who promulgated all of these wild theories that have received so much attention from lay periodicals has been considered "nutty" by probably all of the reputable ophthalmologists. It is unfortunate that he should be taken so seriously by the lay public.

REED & CARNRICK issue a little proprietary journal called *The Medical Pocket Quarterly* which, aside from its advertising pabulum, frequently publishes some editorial comments which not only contain good common sense but are worth pondering over by physicians. In the September number we find something that perhaps our readers may not have seen and which we herewith reproduce:

WHY?

Why does a lawyer get $10—without moving from his seat—for making out a lease that any trained stenographer can fill out in ten minutes, while a physician gets only $1 to $3 for diagnosing and prescribing for a patient's ills, the correction of which will keep him fit to earn thousands?

Why does a mechanical engineer get $50 to $250 for looking over a plant and telling a manufacturer where to place machinery so as to get out of it maximum efficiency, and a physician get 1/25 to 1/125th that sum for looking over a man and telling him how to get the maximum efficiency out of himself?

Why are attorneys able to collect their fees usually in advance and doctors two months to a year after service is rendered, if they ever get them at all?

Why do doctors give away $100,000,000 worth of free service a year in hospitals, clinics, home and office treatment, while other men give away nothing?

Why are butchers, bakers, grocers and milkmen without education, many hardly able to read or write, able to earn more money than thousands of physicians with education?

Why do legislatures concede to lawyers practically every request they make for laws increasing the emoluments and safeguarding the interest of their profession and refuse practically all requests for increasing the emoluments and protecting the interest of physicians engaged in public health work and otherwise?

Why do doctors have to work 14 to 18 hours a day, seven days a week, to earn the monetary rewards of mechanics and other lay workers, working only 8 hours a day, five days a week and half a day Saturday, with all holidays off?

Why is it that a doctor making an honest mistake in the treatment of a patient is sued for malpractice and often mulcted in heavy damages, while a lawyer making the same honest mistake in the trial and handling of a client's case is never sued and never obliged to pay a cent of damages?

Why is it that we have to pay larger premiums for indemnity insurance than rum sellers, manufacturers employing workers at hazardous tasks, and almost every other type of risk?

BECAUSE WE ARE CONSIDERED THE SOFTEST AND EASIEST CLASS ON EARTH ON WHICH TO IMPOSE AND THE VALUE OF THE SERVICE WE RENDER THE WORLD THE LEAST APPRECIATED

ISN'T IT TIME WE WOKE UP AND GOT ON OUR TOES—TIME WE BECAME MORE AGGRESSIVE FOR OUR RIGHTS?

DEATHS

J. A. SMITH, M.D., 83 years old, died at his home west of Brownsville, October 5.

SARAH EMMA PRESTON, wife of Dr. J. L. Preston, of Cloverdale, died July 21, 1921.

MRS. MARY E. ROBINSON, wife of G. M. Robinson, M. D., of Loogootee, died September 27, at her home.

J. W. ELLIOTT, M.D., died at his home in Linden, Indiana, September 27, at the age of 59 years. Dr. Elliott graduated from the Medical Department of the University of Louisville in 1897.

HELEN L. MURRAY, M.D., age 52 years, took her life at her home in South Bend, October 6, as a result of ill health. Dr. Murray was a graduate of the Indiana Medical College, School of Medicine of Purdue University, Indianapolis.

CHAMBERS M. LINDLEY, M.D., aged 89 years, died in the Methodist Hospital at Princeton, October 26. Dr. Lindley graduated from the Ohio College of Medicine, Cincinnati, in 1860, and was a member of the Gibson County Medical Society, the Indiana State Medical Association and the American Medical Association.

WILLIAM F. BATMAN, M.D., of Crawfordsville, died October 23, as a result of apoplexy, at the age of 63 years. Dr. Batman graduated from the Jefferson College of Medicine in 1880. He was a member of the Montgomery County Medical Society, the Indiana State Medical Association and the American Medical Association.

R. H. VAN CLEAVE, M.D., of Farmersburg, was struck by a train and instantly killed on October 15. He was 68 years of age. Dr. Van Cleave graduated from the Medical College of Evansville in 1879 and was a member of the Sullivan County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. SAMUEL HARRELL, of Noblesville, has resumed his practice after a prolonged illness.

THE Eleventh District Medical Society held its regular meeting at Marion, Indiana, October 20.

REV. HENRY W. VITZ, superintendent of the Protestant Deaconess Hospital of Indianapolis, died October 16.

DR. RALPH EMERSON MCINDOO and Miss Phronsie Lucille Martin, both of Kokomo, were married October 15.

DR. E. S. FISHER, formerly of Markle, has removed to Bluffton where he will reside and practice medicine.

THE Tipton County Medical Society was entertained by Dr. and Mrs. John W. Cooper of Kempton, October 5.

DR. EMERSON BARNUM and Miss Pearl M. Coers, both of Manilla, Indiana, were married Thursday, October 6.

DR. VINCENT LAPENTA, of Indianapolis, has been appointed royal consular regent of Italy for the state of Indiana.

THE Whitley County Medical Society held a meeting at Columbia City, October 11. A paper was presented by Dr. E. V. Nolt.

DR. DALE C. WEIR has removed from Mongo, Indiana, to Three Rivers, Michigan, where he will take up the practice of medicine.

DR. HOMER C. GLOCK has been appointed as a member of the city board of health of Fort Wayne to succeed the late Dr. A. J. Kesler.

DR. J. W. BENHAM, of Columbus, will spend the winter in Chicago where he will take special work in eye, ear, nose and throat diseases.

THE training school of the St. Vincent's Hospital of Indianapolis held commencement exercises October 27, seventeen nurses receiving diplomas.

MISS JUNE GRAY, of Indianapolis, was elected president of the Indiana State Nurses' Association at the recent annual convention held in Indianapolis.

DR. G. L. REA has resigned his position as head of the public venereal clinic in Fort Wayne to take charge of a venereal clinic in Charlotte, North Carolina.

MRS. LUCIAN HARRIS, of Rising Sun, has been appointed a member of the board of trustees of the Southeastern Hospital for the Insane by Governor McCray.

DR. G. M. LASALLE, of Wabash, has resigned from the firm of Drs. Wilson, LaSalle and Whistler and will devote his time exclusively to the practice of surgery.

THE Randolph County Medical held its meeting at Winchester, October 10. Dr. C. E. Bodkin presented a paper on "Radium" and demonstrated the use of radium.

DR. CHARLES E. BARNETT, of Fort Wayne, was elected president of the Mississippi Valley Medical Association at the recent annual convention held in St. Louis.

THE Adams County Medical Society met Friday evening, September 24, at the home of Dr. C. P. Hinchman of Geneva. An address was given by Dr. Ben Beavers of Decatur.

THE regular monthly meeting of the Madison County Medical Society, held October 17, was addressed by Dr. Julius Hess, professor of children's diseases in Chicago University.

PROFESSOR SODDY, of Oxford University, took to London two grams of radium which England is to have the use of for fifteen years when it is to be returned to Czechoslovakia.

A BEQUEST of $200,000.00 has been left to the medical school of Harvard University by Hiram F. Mills of Hingham, Massachusetts, for use in scientific research for a remedy for cancer.

DR. BYRON N. LINGEMAN, formerly with Dr. J. H. Barnhill of Indianapolis, is now associated with Dr. H. E. Greene, Joel Block, Crawfordsville, with practice limited to ear, nose and throat.

DR. and MRS. BERNARD RAVDIN, of Evansville, left October 16 for a six weeks' trip to New York and Philadelphia where Dr. Ravdin will take special work in the diseases of the eye, ear, nose and throat.

DR. PAUL T. HURT won the golf tournament conducted by the Indiana State Medical Association at Highland links, Indianapolis, Wednesday, September 28. Forty physicians were entered from throughout the state.

DR. W. A. HOLLIS, of Hartford City, attended the annual session of the American Academy of Ophthalmology and Otolaryngology and the Clinical Congress of Surgeons at Philadelphia. He returned about the first of November.

DR. J. D. MCCANN, of Monticello, went to Chicago, October 22, where he attended the meeting of the Association of Pennsylvania Railway Surgeons, of which he is president, and the national meeting of the American Railway Surgeons.

DR. ALBERT E. BULSON, JR., spent the last two weeks of October in the East. While there he attended the annual session of the American Academy of Ophthalmology and Otolaryngology and the Clinical Congress of the American College of Surgeons in Philadelphia.

THE Eye Sight Conservation Council of America is a recently formed organization, with headquarters in New York City, which purposes to create a greater appreciation of the importance of the care of the eye. The council is supported by voluntary contributions.

DR. J. O. RITCHEY has been appointed superintendent of the city dispensary at Indianapolis to replace Robert E. Neff, who resigned. The Board of Public Health also appointed Dr. Philip H. Sheridan as district physician for the dispensary to succeed Dr. George Bowman, who resigned.

THE School of Hygiene of Johns Hopkins University will send an expedition in May, 1922, to study the problems of health among the Eskimos in Labrador. Dr. Victor E. Levine of the Creighton School of Medicine, Omaha, will go in advance for a preliminary survey of the climatic conditions.

THE DeKalb County Medical Society held a meeting at Garrett, October 13. A clinic was held at the Sacred Heart Hospital, and at the banquet, served by the Sisters, a paper was presented by Dr. House, his subject being "The Conscious and Sub-conscious Mind and Its Effect on the Physical Condition."

DRS. JAMES R. and JOHN W. NORREL, J. T. JOHNSON and S. H. J. DAVID will establish a hospital at 769 Indiana Avenue, Indianapolis, Indiana, for the exclusive treatment of negroes. The hospital will include a nurses' training school for colored nurses. It will be operated under the name of the Provident Sanitarium Association.

THE Howard County Medical Society held its regular monthly meeting at Kokomo, October 7. Dr. F. S. Cuthbert presented the main paper of the evening, the subject of which was "Diagnosis of some of the more frequently met with complications in the eye, ear, nose and throat practice as it concerns the general practitioner."

THE first fall meeting of the Muncie Academy of Medicine was held at the Hotel Roberts, Muncie, October 23. About 250 physicians were present. The main address of the evening was presented by Dr. I. O. Porter, of Buffalo, N. Y., who is president of the American Gynecological and Obstetrical Society. His subject was "Versions."

THE National Anesthesia Research Society, in convention at Kansas City, October 25, presented a silver loving cup to Dr. Arthur E. Guedel, of Indianapolis, in appreciation of his pioneer work in nitrous oxide obstetric anesthesia. Dr. Guedel has assumed charge of the anesthesia department of St. Vincent's Hospital, Indianapolis.

THE first American Birth Control Conference has been called in New York City for November 11, 12, and 13. There will be discussions on the question of population and social aspect, medical aspect and private discussion of practical methods by authorized delegates, and mass meeting and organization of an American Birth Control League.

MISS ANNETTE B. COWLES of the City Hospital, Indianapolis, was elected president of the Indiana League of Nursing Education at the nineteenth annual convention of the Indiana Nurses' Association. Miss Mary Peterson, of the Robert W. Long Hospital, was made vice-president, and Miss I. L. Goepinger, of the Deaconess Hospital, was made secretary-treasurer.

THE Muncie Academy of Medicine held a meeting at the Hotel Roberts, Muncie, October 28. A paper was given by Dr. Martin H. Fischer, professor of physiology of the University of Cincinnati, on the subject of "Arteriosclerosis". Dr. C. P. Emerson of Indianapolis, Dr. G. W. McCaskey of Fort Wayne, and Dr. Weir Miley of Anderson lead the discussion of Dr. Fischer's paper.

IT was stated at the annual convention of the International Association of Industrial Accident Boards, held in Chicago, September 20, that the economic loss caused by industrial accidents amounted to about $1,000,000,000. The wage loss approximated $853,000,000 and other costs, including surgical, hospital and administrative expense in connection with compensable accidents, added $161,000,000 to the bill.

PREPARATIONS were made for a drive to collect $8,000,000 for the erection of hospitals by the Imperial Council of the Shrine at a meeting of the Hospital Committee held in St. Louis, September 25th. The central hospital, to cost approximately $1,000,000, will be in St. Louis, with others at San Francisco; Shreveport, Louisiana; Portland, Oregon; Minneapolis or St. Paul, Minnesota, and Montreal.

A NUMBER of changes are announced in the faculty of the Yale Medical School. New professors are Dr. Francis G. Blake, Dr. John Slade Ely, professors of medicine, and Dr. Edwards A. Park, professor of pediatrics. Dr. Arthur M. Morse is head of the department of obstetrics and gynecology. New associate professors are Dr. John P. Peters, Jr., department of medicine, and Dr. Alfred T. Shohle, department of pediatrics. Dr. Samuel C. Harvey is in charge of the surgical department of the school, assistant professors being Dr. Clyde L. Deming, urology; Dr. J. J. Morton, Jr., surgery; Dr. Grover F. Powers, pediatrics, and Dr. William C. Stadie, medicine. Dr. Eugene M. Blake has been made assistant clinical professor of ophthalmology.

DURING October the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Davis & Geck:
- Kalmerid Germicidal Tablets, Potassium-Mercuric-Iodide.

Eastman Kodak Company:
- Eastman Barium Sulphate for Roentgenology.

Powers-Weightman-Rosengarten Co.:
- Copper Citrate-P. W. R.
- Mercury Benzoate-P. W. R.
- Mercury Cyanide-P. W. R.
- Mercury Succinimide-P. W. R.
- Silver Citrate-P. W. R.
- Silver Lactate-P. W. R.

Solution Arsphenamine-Lowy: This product has been acquired by E. R. Squibb & Sons, and is retained in New and Nonofficial Remedies as Solution Arsphenamine-Squibb.

A fraternal organization asked a disciple of one of the pseudo-medical cults for a statement concerning an examination of one of their members. The report, given with accuracy but with names omitted, was as follows:

TO WHOM IT MAY CONCERN:

This certifies that Mr. ———— presented himself at my office for physical examination on August 12, 1919.

Upon examination we found the following condition:
A diastolic heart murmur.
Blood pressure low.
Patient losing flesh, is thin and emaciated.
Stomach and bowels full flatus.
Appetite poor.
Constipation.
A moderate hypdaosis of thoracic spine.
Loodosis of cervical and lumbar spine.
Both of above areas of spine markedly stiff and tense.
Patient was advised to rest with treatment, with which he is now complying with improvement.

J. L. W————,
D.O.M.D.D.P.H.

The contributor who favors us with this piece of literature says that the patient is still living and that it is fortunate that such a skillful "doctor", who requires seven letters to enumerate his numerous degrees, had the case in hand.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	87
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	24
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	27
15.	Washington	Irvin Huckleberry	5	13
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19
18.	Allen	Miles F. Porter, Jr.	95	105
19.	Greene	W. R. Cravens	16	18
20.	Henry	C. E. Canaday	25	29
21.	Switzerland	R. M. Copeland	7	8
22.	Fulton	A. E. Stinson	15	17
23.	Jay	C. A. Paddock	18	20
24.	Lake	E. E. Evans	84	95
25.	Marshall	T. C. Eley	20	22
26.	Morgan	C. G. Bothwell	11	13
27.	Vanderburgh	Pierce McKenzie	72	82

INDIANA STATE MEDICAL ASSOCIATION

Indianapolis Session, September, 1921

HOUSE OF DELEGATES—FIRST MEETING

The first meeting of the House of Delegates was called to order at seven o'clock, September 28, 1921, by the President, Dr. David Ross of Indianapolis.

Charles N. Combs, the Secretary, called the roll of delegates, and there being a quorum present the House was declared in session.

The President called for the reading of the minutes of the previous session, but on motion of Dr. George R. Daniels, Marion, duly seconded, the minutes as printed in the September number of THE JOURNAL were adopted and the reading at this time dispensed with.

It was moved by Dr. G. D. Miller, Logansport, that the Report of the Secretary-Treasurer as printed in THE JOURNAL be accepted. Motion seconded and carried.

The Secretary mentioned one item of his report—the making of Dr. G. W. H. Kemper an honorary member of this Association, thus making him eligible to be made an Affiliate Fellow of the American Medical Association. It was moved by Dr. William R. Moffit, Lafayette, that Dr. Kemper be made an honorary member of this Association. Motion seconded by Dr. George W. Finley, Brazil, and many others, and unanimously carried by rising vote.

Dr. George F. Keiper, Lafayette, then called attention to another item of the Secretary's report—the long service of some of the county secretaries, especially that of Dr. Allen Pierson, of Spencer, and moved that the congratulations of the Association be extended to Dr. Pierson for his forty years of continuous service in this capacity. Motion seconded and unanimously carried by rising vote.

On motion of Dr. George R. Daniels, Marion, the reports of standing committees as printed were adopted.

The Secretary then read, under the head of "Communications", a letter from Mrs. Marie D. Gorgas, thanking the Association for the resolution of a year ago regarding General Gorgas; also a letter from Dr. G. W. H. Kemper, now in Pasadena, California, to the House of Delegates, which was as follows:

To the House of Delegates of the Indiana State Medical Association:

It is fifty-four years since I attended the Indiana State Medical Association for the first time; this was at the May session of 1867. Since that date I have missed only a few sessions. I learned to cherish these yearly assemblies with a great deal of delight, for they were my true vacation periods—periods of pleasure and profit.

Those were years when the "Transactions" were issued annually and these were in their infancy—merely pamphlets in paper backs. They were not dignified with muslin enclosure until about the year 1874, and this was the fashion until they ceased to exist in 1907, giving way to our splendid Journal in 1908. These pamphlets and volumes—58 in number (1847-1907)—contained 1202 articles contributed by 481 physicians and scientific men. Many of these essays may be read with advantage at the present day when we have made so much advancement in medical science.

When I attended the session of the State Medical Association of 1867, I met with a number of remarkable men. They were no ordinary physicians for that period. All have gone upon that unreturning visit. Here again I met Dr. John S. Bobbs. I first saw him on the 24th day of May, 1861, when I was a private soldier in Co. B of the 7th Regiment, Indiana Volunteer Infantry—three months' service. On the day named five of the Indiana regiments were reviewed at Indianapolis, by General George B. McClellan. On this occasion Dr. Bobbs rode with the three Governors: Morton of Indiana, Dennison of Ohio, and Yates of Illinois. These men, and I presume nearly all the men into whose faces they looked at that parade, have fallen asleep. I believe I am the "last leaf" of the early members of the Indiana State Medical Association. I am not aware of others. Possibly I am the ranking living member. The Association always has treated me liberally. For a number of years I was treasurer. I am the senior living ex-president of the society, having been elected president in 1886, and presided the following year—1887—thirty-four years ago last May. I was elected the first delegate to the American Medical Association in 1902. I held the position of councilor from 1903 to 1920. I served twenty years as chairman of the committee on necrology. I am sure that my medical brethren will pardon these personal references in this letter. I simply dropped into a historical reverie for the moment.

It would afford me much pleasure to meet with the Association which will convene this present month, but I am far away. Possibly it is better that I remain for a longer period in this milder climate. California, with its beautiful hills, valleys and mountains decorated with lovely flowers, is unsurpassed by no other country that I have visited. And yet, I love more dearly my own native state of Indiana. In that fine poem—"The Deserted Village"—Goldsmith makes his poet wish that after his long and wild wanderings were over that he might find a burial spot in his early home.

"And as the hare whom hounds and horns pursue,
Pants to the place from which at first she flew;
So had I hoped, life's long vexation past,
Here to return and die at home at last."

My health has gradually improved—thanks to my good friend, Dr. W. N. Wishard, and a Kind Providence.

With love for the Association and all its members,
G. W. H. KEMPER.

Pasadena, Calif., Sept. 20, 1921.
1239 E. Orange Grove Ave.

It was taken by consent that the letter of Mrs. Gorgas be filed as a matter of record, and that the Secretary be instructed to reply to Dr. Kemper's letter.

Dr. William R. Phillips, of Connersville, then spoke on the subject of medical legislation, especially that affecting the Medical Practice Act. This discussion was continued by Drs. J. A. Craig, Greenwood; Edward E. Evans, Gary; Charles H. McCully, Logansport; Elmer E. Morgan, Fort Wayne, and G. G. Eckhart, Marion.

It was then moved by Dr. Wm. R. Phillips that a committee of five be appointed by the Chair to draw up resolutions covering this matter, this committee to report to the House of Delegates Friday morning. Motion seconded by Dr. Franklin S. Crockett, Lafayette, and carried.

The president appointed the following committee: William R. Phillips, Connersville; George R. Daniels, Marion; J. A. Craig, Greenwood; Franklin S. Crockett, Lafayette; Edward E. Evans, Gary.

Dr. George F. Keiper then called attention to the Indiana State Hospital Association, recently organized, and moved that this Association send its greetings and best wishes to the Hospital Association. Motion seconded and carried.

No further business appearing, the House of Delegates adjourned until Friday morning at eleven.

CHAS. N. COMBS, Secretary.

HOUSE OF DELEGATES—SECOND MEETING

The second meeting of the House of Delegates was called to order by President Dr. David Ross at 11:00 a. m., Friday, September 30th.

Election of officers for the year 1922 was the first order of business, and resulted as follows:

President—Dr. W. R. Davidson, Evansville.

First Vice-Pres.—Dr. Thomas M. Jones, Anderson.

Second Vice-Pres.—Dr. John H. Reed, Logansport.

Third Vice-Pres.—Dr. E. S. Jones, Hammond.

Sec'y-Treas.—Dr. Charles N. Combs, Terre Haute (re-elected).

Delegates to the American Medical Association for the ensuing two years: Dr. Albert E. Bulson, Jr., Fort Wayne; Dr. George F. Keiper, Lafayette.

Alternates: Dr. E. H. Griswold, Peru; Dr. Harry Elliott, Brazil.

Dr. E. M. Shanklin, of Hammond, was re-elected chairman of the Committee on Administration and Medical Defense for the ensuing three years.

Dr. W. H. Stemm, of North Vernon, was re-elected on the Committee on Hospital Standardization for the ensuing five years.

The following councilors were elected, their terms to expire December 31, 1924: Second District, Joseph Schmadel, Vincennes; Fifth District, Joseph H. Weinstein, Terre Haute.

The eighth and eleventh councilor districts reported that their councilor would be elected before the end of the year.

Dr. W. R. Phillips, Connersville, submitted the report of his committee Wednesday night, and, as amended, was adopted as follows:

WHEREAS, The past decade has demonstrated the extreme difficulty of securing the passage of good medical legislation or of measures designed to strengthen the present laws, and

WHEREAS, There is an increasing tendency on the part of certain cults and classes to ignore laws as they now exist, and

WHEREAS, Such conditions tend to undermine the laws of the state and to weaken and eventually destroy the medical fabric as it now exists, thereby producing an irreparable loss to all concerned; therefore be it

RESOLVED, That it is the sense of this Association that we should, within the body of the profession itself, seek to build up a method of defense of the rights of the profession and of the safety of the public at large. Be it further

RESOLVED, That we urge that greater power be given the Committee on Public Policy and Legislation, and that a standing vote of thanks and appreciation be accorded the venerable and honorable chairman of the Committee, Dr. Wm. N. Wishard, for his untiring and ceaseless efforts to upbuild and uphold the legal fabric of the profession of Indiana. Be it further

RESOLVED, That we seek to promulgate a stronger organization to bring about a closer and more complete and efficient co-operation among the several county societies; and be it further

RESOLVED, That any of the funds of the Association not in excess of $5,000 be, and the same is hereby rendered available, under the direction of the Council, for the investigation and prosecution of violation of the present medical laws.

Dr. Lafayette Page, of Indianapolis, spoke on the needs of the proposed Riley Memorial Hospital, and appealed for its support.

Dr. Albert E. Bulson, Jr., moved that the Indiana State Medical Association endorse the project of establishing the Riley Memorial Hospital for *indigent* children of the State.

Moved, seconded and carried.

Dr. J. R. Newcomb, Indianapolis, moved that we heartily endorse the invitation of the Eye, Ear, Nose and Throat Section of this Association to the Academy of Ophthalmology and Otolaryngology to hold its 1922 session in Indianapolis.

Consent.

Dr. A. E. Sterne, Indianapolis, chairman of the Committee on Hospital Standardization, introduced the following resolution as a supplementary report, and, after considerable discussion, it was adopted as follows:

Realizing that the Hospital Standardization Classification in Indiana and other states of the United States is admittedly confused and chaotic, chiefly for the reason that different agencies are attempting to classify hospitals and institutions without concerted, considerate effort, and, realizing further, that a continuance of such a policy will maintain and augment the chaos and difficulties of the entire hospital question, and believing that the A. M. A. through its Council on Education and Hospitals should assume and retain the leadership in this matter, and affirming its confidence in the ability and integrity of this leadership, the House of Delegates of the Indiana State Medical Association petitions the Council on Education and Hospitals of the A. M. A. and respectfully suggests:

First, That the Council invite the proper committees of various recognized medical organizations, actively engaged in hospital standardization work, to meet in joint conference, in order to unify and coordinate the efforts of the several organizations to attain a standard classification of the hospitals of the United States; and

Second, Further suggests that the Council on Medical Education and Hospitals, at an early date and appointed place, call a meeting of the chairmen and other members of the Hospital Standardization Committees of the component state medical associations, and any other properly accredited delegates from these associations, in order that this work may be conducted in the various states upon similar lines and upon unified standards.

Dr. J. M. McCoy, of Vincennes, proposed that the Association investigate the plan of adopting group automobile liability insurance for the members. The incoming president was instructed to appoint a committee of five to investigate this question.

Dr. George R. Daniels, Marion, moved a vote of thanks to the Indianapolis Medical Society for the splendid entertainment provided for this annual session.

Carried.

By unanimous vote, the next annual session is to be held at Muncie, September 27th, 28th and 29th, 1922.

Adjournment. CHAS. N. COMBS, Secretary.

THE COUNCIL—FIRST MEETING

The first meeting of the Council was held at the Claypool Hotel, Indianapolis, Wednesday, September 28th, at 4:30 p. m. Called to order by the Chairman, Dr. E. M. Shanklin.

Present: Drs. S. E. Earp, W. R. Moffit, E. M. Shanklin, J. B. Berteling, G. G. Eckhart, C. N. Combs and President Dr. David Ross.

The minutes of the previous meetings were read and accepted.

The councilors made reports of their respective districts, and discussion ensued concerning the status of the profession in Starke County. An effort will be made before the end of this year to rehabilitate the Starke County Medical Society, or if that is not possible, the county will be joined to that of Pulaski.

A letter was read from Dr. W. N. Wishard, urging the annual publication of the list of members of the Indiana State Medical Association to be available for officers and committeemen. The secretary was instructed to ask the editor to publish this list in the December number of THE JOURNAL.

Adjourned. CHAS. N. COMBS, Secretary.

THE COUNCIL—SECOND MEETING

The last meeting of the Council was held Friday, September 30th, at 1:30 p. m.

Present: Drs. S. E. Earp, W. R. Moffit, W. J. Leach, F. J. Spilman, J. H. Willis, A. E. Bulson, Jr., and C. N. Combs.

After discussing the funds to be made available for the new Committee on Public Policy and Legislation, it was moved and carried that the Council ask the new Committee to attend the mid-winter meeting of the Council in January.

It was suggested that the annual session would be more notable if out-of-state guests were invited by each section, and the Council recommends to the section officers to invite a guest for each section for the coming session.

Adjournment. CHAS. N. COMBS, Secretary.

MINUTES OF GENERAL MEETING

Indianapolis Session, September, 1921

The first general meeting of the Indiana State Medical Association was called to order at nine a. m., September 29, 1921, in the Assembly Room of the Claypool Hotel, Indianapolis, by the President, Dr. David Ross, of Indianapolis.

The Mayor of Indianapolis was not present, but Dr. Ross in a few words welcomed the members of the Association.

Dr. Miles F. Porter, of Fort Wayne, was given the privilege of the floor for a few minutes to present the claims of the American Society for the Control of Cancer. Dr. Porter is the Chairman of the Indiana branch of this Society.

The President, Dr. David Ross, of Indianapolis, read his address, entitled "Medicine and State Control". (Published in this number of THE JOURNAL.)

Dr. B. W. Rhamy, of Fort Wayne, read a paper entitled "Ulcer of the Stomach and Duodenum: Etiology and Pathology."

Dr. W. H. Foreman, Indianapolis, read a paper on "Ulcer of the Stomach and Duodenum: Diagnosis and Medical Treatment."

Dr. J. R. Eastman, Indianapolis, read a paper entitled "Ulcer of the Stomach and Duodenum: Surgical Technique."

The above symposium was discussed by Drs. Miles F. Porter, Fort Wayne; A. B. Graham, Indianapolis; W. D. Asbury, Terre Haute; Frank W. Foxworthy, Indianapolis; G. W. McCaskey, Fort Wayne; H. O. Pantzer, Indianapolis, and in closing by Drs. W. H. Foreman and J. R. Eastman.

Dr. Charles P. Emerson, Indianapolis, read a paper entitled "Treatment of Chronic Nephritis". This paper was discussed by Drs. G. W. McCaskey, Fort Wayne, and E. F. Kiser, Indianapolis.

The General Meeting adjourned until Friday afternoon at two o'clock.

Second Meeting

The second General Meeting of the Indiana State Medical Association was called to order at 2:20 p. m., September 30, 1921, by the First Vice-President, Dr. Hugh J. White of Hammond.

Dr. H. R. Allen, Indianapolis, read a paper entitled "The Treatment of Club Feet". This paper was discussed by Drs. G. D. Marshall, Kokomo; Oscar T. Scamahorn, Pittsboro, and by Dr. H. R. Allen in closing.

Dr. G. B. Jackson, Indianapolis, presented a paper on "Sterility in the Female". This paper was discussed by Dr. O. G. Pfaff, Indianapolis, and Dr. Arnold Province, Franklin.

The chairman then announced that Dr. W. R. Davidson, of Evansville, had been elected President of the Association for the ensuing year, and that the place of meeting for 1922 would be Muncie.

Dr. E. B. Mumford, Indianapolis, read a paper entitled "The Treatment of Compound Fractures". This paper was discussed by Drs. H. O. Bruggeman, Fort Wayne; H. R. Allen, Indianapolis, and the discussion closed by Dr. E. B. Mumford.

Dr. W. U. Kennedy, Newcastle, read a paper entitled "Traumatic Abdominal Injuries". This paper was discussed by Dr. W. P. Williams, Lebanon, and the discussion closed by Dr. W. U. Kennedy.

The program being finished, the General Meeting adjourned.

MINUTES OF SECTION ON SURGERY

Indianapolis Session, September, 1921

The first meeting of the Section on Surgery was called to order at 2:10 p. m., September 29, 1921, in the Assembly Room of the Claypool Hotel, Indianapolis, by the Chairman, Dr. Charles C. Terry, of South Bend.

Dr. W. H. Baker, South Bend (together with Dr. M. W. Lyon, Jr.), presented a paper on "Cecal Tuberculosis". This paper was discussed by Drs. J. H. Eberwein, Indianapolis; A. S. Jaeger, Indianapolis; John Sluss, Indianapolis; B. Van Sweringen, Fort Wayne; Goethe Link, Indianapolis; W. H. Williams, Lebanon, and in closing by Dr. W. H. Baker.

Dr. H. K. Bonn, Indianapolis, read a paper entitled "Operative Injury of the Hepatic and Common Bile Ducts. Methods of Avoidance and Repair." This paper was discussed by Drs. H. O. Shafer, Rochester; Goethe Link, Indianapolis; B. Van Sweringen, Fort Wayne; Ernest I. Brenner, Winchester; A. S. Jaeger, Indianapolis, and in closing by Dr. H. K. Bonn.

Dr. Murray N. Hadley, Indianapolis, read a paper entitled "Local Anesthesia as a Supplement to General Narcosis". This paper was discussed by Drs. A. C. Arnett, Lafayette; Frank H. Jett, Terre Haute, and the discussion closed by Dr. M. N. Hadley.

Dr. James Y. Welborn, Evansville, read a paper entitled "Conclusions from My Experience in Appendicitis". This paper was discussed by Dr. G. D. Scott, Sullivan, and in closing by Dr. James Y. Welborn.

Dr. A. S. Jaeger, Indianapolis, read a paper entitled "Notes on the Treatment of Septic Infection Following Delivery or Abortion". This paper was discussed by Drs. Joseph H. Weinstein, Terre Haute; Frank S. Holland, Bloomington, and the discussion closed by Dr. A. S. Jaeger.

The Section adjourned until nine o'clock Friday morning.

Second Meeting

The second meeting of the Section on Surgery was called to order at 9:25 a. m., September 30, 1921, by the Vice Chairman, Dr. H. K. Bonn, of Indianapolis.

The paper of Dr. P. E. McCown, Indianapolis, on "Non-Tuberculous Infection of the Kidney" was read by Dr. Frank G. McCarthy, of Terre Haute, Dr. McCown being absent on account of illness. This paper was discussed by Drs. Charles Barnett, Fort Wayne; Bernard Erdman, Indianapolis; H. O. Mertz, Indianapolis, and J. F. Cameron, Fort Wayne.

Drs. J. H. Oliver and V. H. Moon read papers on "Osteitis Fibrosa and Osteitis Fibrosa Cystica". These papers were discussed by Drs. Charles M. Mix, Muncie; G. D. Marshall, Kokomo.

The election of officers for this Section took place at this time, resulting as follows: Chairman, A. S. Jaeger, Indianapolis; Vice Chairman, T. C. Kennedy, Indianapolis; Secretary, H. W. McDonald, Newcastle.

Dr. Stanley A. Clark, South Bend, read a paper on "The Treatment of Cancer of the Uterine Cervix". This paper was discussed by Drs. Grace Line Homan, Laporte; George Kohlstadt, Indianapolis; Albert M. Cole, Indianapolis; Thomas C. Kennedy, Indianapolis; O. E. Spurgeon, Muncie; H. O. Shafer, Rochester, and in closing by Dr. Stanley A. Clark.

Dr. W. D. Gatch, Indianapolis, read a paper entitled "The Clinical History of Tumors of the Face and Jaws as a Guide to Their Correct Diagnosis and Proper Treatment". This paper was discussed by Drs. T. C. Kennedy, Indianapolis; Albert M. Cole, Indianapolis; Edwin N. Kime, Indianapolis; W. U. Kennedy, Newcastle; H. K. Bonn, Indianapolis, and in closing by Dr. W. D. Gatch.

The Section adjourned.

MINUTES OF THE SECTION ON MEDICINE
Indianapolis Session, September, 1921

The first meeting of the Section on Medicine of the Indiana State Medical Association was called to order in the Claypool Hotel, Indianapolis, at 2:15 p. m., by the Vice-Chairman, Dr. George G. Richardson, Van Buren.

Dr. Maurice H. Krebs, Huntington, presented a paper on "Foreign Bodies Within the Respiratory Tract as Causative Factors in the Production of Pathological Conditions".

This paper was discussed by Drs. Alfred Henry, Indianapolis; C. A. Sellers, Hartford City; John Barnhill, Indianapolis; and George G. McConnell, Indianapolis, and the discussion was closed by Dr. Krebs.

Dr. W. A. Fankboner, Marion, read a paper on "Epidemic Encephalitis".

This paper was discussed by Drs. E. O. Daniels, Marion; Clay Ball, Muncie; George F. Beasley, Lafayette; Chas. F. Neu, Indianapolis; Chas. D. Humes, Indianapolis; P. B. Carter, and Albert E. Sterne, Indianapolis, and in closing by the essayist.

Dr. Jane Ketcham, Indianapolis, presented a paper on "Eclampsia".

This paper was discussed by Drs. Fred R. Clapp, South Bend; Chas. S. Bond, Richmond; Elmer E. Morgan, Fort Wayne; Wm. F. Smith, Huntington; Chas. H. Good, Huntington; Morris H. C. Johnson, Vincennes, and the discussion was closed by the essayist.

Dr. Charles G. Beall, Fort Wayne, read a paper entitled "Functional Nervous Disturbances in Soldiers and Civilians".

This paper was discussed by Drs. W. D. Asbury, Terre Haute; Chas. D. Humes, Indianapolis, and the discussion was closed by Dr. Beall.

The Chairman explained that Dr. James L. Gilbert, of Logansport, was unable to be present on account of illness, and moved that the Secretary be instructed to send a message of sympathy from the Section to Dr. Gilbert, and that his paper be released so that it might be read and published by Dr. Gilbert wherever he saw fit.

Supported by several members and unanimously carried.

Adjournment at 5:45 p. m. to reconvene at 9:00 a. m. Friday, September 30.

Second Meeting

The second meeting of the Section on Medicine was called to order at 9:00 a. m. by the Chairman, Dr. Fred R. Clapp, South Bend.

Election of Officers:

The following gentlemen were elected as Section Officers for the ensuing year: Chairman, Dr. Geo. G. Richardson, Van Buren; Vice-Chairman, Dr. Roscoe H. Beeson, Muncie; Secretary, Dr. Byrl R. Kirklin, Muncie.

Dr. Arlie R. Barnes, Rochester, Minnesota, presented a paper entitled "Bacteria Recovered Post-Mortem. With Special Reference to Selective Localization and Foci of Infection".

This contribution was discussed by Drs. Virgil Moon, Indianapolis; George W. McCaskey, Fort Wayne; Henry R. Alburger, Indianapolis; Frank Wynn, Indianapolis, and Robert V. Hoffman, South Bend, and in closing by the essayist.

Dr. R. V. Hoffman, South Bend, read a paper on "Some Problems in Syphilis".

This paper was discussed by Drs. Wm. S. Ehrich, Evansville; George W. McCaskey, Fort Wayne; A. W. Brayton, Indianapolis; W. A. Fankboner, Marion, and the discussion was closed by Dr. Hoffman.

Dr. John W. Sluss, Indianapolis, presented a paper on "Infections of the Gall Bladder".

This paper was discussed by Drs. W. D. Asbury, Terre Haute; Wm. H. Foreman, Indianapolis; Geo. W. McCaskey, Fort Wayne; George W. Spohn, Elkhart, and the discussion was closed by Dr. Sluss.

Dr. George W. Spohn, Elkhart, read a paper entitled "The Physical Inequality of School Children".

This paper was discussed by Drs. Ada E. Schweitzer, Indianapolis; George V. Cring, Portland; A. W. Brayton, Indianapolis, and the discussion was closed by Dr. Spohn.

Dr. Charles S. Woods, Indianapolis, presented a paper on "Professional Efficiency in the Hospital".

This contribution was discussed by Drs. H. G. Hamer, Indianapolis; A. C. Kimberlin, Indianapolis; Charles E. Barnett, Fort Wayne.

As this completed the program, on motion duly seconded and carried, the Section on Medicine adjourned at 12:40 *sine die*.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY
Indianapolis Session, September, 1921

The Section on Ophthalmology and Otolaryngology of the Indiana State Medical Association met in Parlor B of the Claypool Hotel, Indianapolis, Indiana, at two o'clock p. m., on Thursday, September 29, 1921, with the Chairman of the Section, Dr. W. A. Hollis, of Hartford City, presiding.

Dr. Keiper exhibited to the Section a microscopic specimen showing a patch of choroidal atrophy.

Dr. Hollis called Dr. McCasky to the Chair, and read a paper entitled "Some Professional Shortcomings".

This paper was discussed by Drs. Shanklin, Stucky (of Lexington, Kentucky), Breitenbach, and Adams, and in closing, by Dr. Hollis.

Dr. Hollis resumed the Chair.

Dr. Howard, of Warsaw, read a paper entitled "Report of a Case of Bezold's Mastoiditis, Preceded by Thirty Years of Middle Ear Suppuration".

This paper was discussed by Drs. Lent, Boyd-Snee, Edgar, Sautter and Barnhill, and the discussion was closed by Dr. Howard.

Dr. J. A. Stucky, of Lexington, Kentucky, read a paper entitled "Trachoma or Folliculosis Among School Children".

This paper was discussed by Drs. Shanklin, Larkin, Bulson, Keiper, Newcomb, Rariden and Kearby, and the discussion was closed by Dr. Stucky.

There being no further business to come before the Section, on motion duly made, seconded and carried, the Section adjourned until Friday, September 30, 1921, at nine o'clock a. m.

Second Meeting

The second meeting of the Section on Ophthalmology and Otolaryngology was called to order at 9:00 a. m., Friday, September 30th, by the Chairman, Dr. William A. Hollis.

The election of officers for the ensuing year resulted as follows: Chairman, Dr. C. H. McCasky, Indianapolis; Vice-Chairman, Dr. Chas. J. Adams, Kokomo; Secretary, Dr. E. M. Shanklin, Hammond.

Dr. Keiper moved that the Section invite the American Academy of Ophthalmology and Otolaryngology to meet in Indianapolis next year, and that this invitation be extended at the session of the Academy, at Philadelphia, on the 17th of October next. Motion carried.

Dr. Shanklin moved that the Section extend to Dr. J. A. Stucky its thanks for coming here and giving to the Section his estimable paper.

The motion was seconded, and prevailed.

Dr. Kearby read a paper entitled "What the General Practitioner Can Do in Otology".

This paper was discussed by Drs. Spohn, Bulson, Keiper, McCasky, Krebs and Hollis, and the discussion was closed by Dr. Kearby.

Dr. George F. Keiper read a paper entitled "Sand Bur in the Larynx, Report of a Case. Endoscopic Removal."

This paper was discussed by Drs. Layman, Bulson and Knapp, and the discussion was closed by Dr. Keiper.

Dr. Harry Boyd-Snee, of South Bend, read a paper entitled "The Clinical Picture of Streptococcic Osteomyelitis of the Temporal Bone".

This paper was discussed by Drs. Breitenbach, Cuthbert, Bulson, Tomlin and Howard, and the discussion was closed by Dr. Boyd-Snee.

Dr. William F. Molt, of Indianapolis, read a paper entitled "Ludwig's Angina, Complicating Acute Suppuration of the Parotid Gland".

This paper was discussed by Drs. Boyd-Snee and Berry.

There being no further business to come before the Section, on motion duly made, seconded and carried, the Section adjourned, *sine die*.

MONTGOMERY COUNTY

At a special meeting of the Montgomery County Medical Society, held at the Masonic Temple, October 25, a committee consisting of Drs. W. T. Gott, F. A. Dennis and J. R. Etter was appointed to prepare a suitable memorial on the demise of Dr. Samuel L. Ensminger, which occurred September 25, 1921.

Preamble:

Samuel L. Ensminger graduated from the Miami Medical College in 1874 and soon thereafter began the practice of medicine in Crawfordsville, being for a number of years associated with Drs. McClelland and Cowan. He continued to practice in Crawfordsville during the remainder of his active life. He served in the Union army during the Civil War, being severely wounded. He was a member of the Montgomery County Medical Society, having served it as secretary and president, and was a member of the Indiana State Medical Association and the American Medical Association. He had the confidence and respect of the community in which he practiced for more than forty-seven years.

RESOLVED, By the Montgomery County Medical Society, That in the death of Dr. Samuel L. Ensminger, this Society has lost a valued member, who was always willing to do his duty. Be it further

RESOLVED, That this memorial be spread on the records of the Society, and a copy presented to the family, who have our deepest sympathy.

Special meeting of the Montgomery County Medical Society, October 25, 1921.

On account of the death of Dr. William F. Batman, President of the Society, the vice-president called a special meeting to attend the funeral and take suitable action in the matter. A committee, consisting of Drs. W. T. Gott, E. A. Dennis and J. R. Etter, was appointed to draft a suitable memorial in his behalf.

Preamble:

William F. Batman was graduated from the Jefferson Medical College in 1880, and practiced medicine at Roachdale, Ladoga and Crawfordsville. He joined the Montgomery County Medical Society, March 20, 1900. At the time of his death he was president of the Society. He was a member of the Indiana State Medical Association and the American Medical Association. He was an honored member of the medical profession, and a worthy citizen. His demise occurred October 23, 1921.

RESOLVED, By the Montgomery County Medical Society, That in the death of Dr. Batman we have lost a valuable co-worker, and that a copy of these resolutions be placed on the records of the Society, a copy be presented to the family, who have our deepest sympathy.

MUNCIE ACADEMY OF MEDICINE

September 23, 1921

The Muncie Academy of Medicine met at the Hotel Roberts at 6:15 p. m. on Friday evening, September 23rd, for the regular dinner meeting. The business routine was waived and Dr. Irving Potter, of Buffalo, the guest of the Academy and the speaker of the evening, was introduced by President B. R. Kirklin. Dr. Potter's subject was "Version" and the address was illustrated by lantern slides.

Synopsis:—In 1130 cases of version the mortality has been 2.3 percent. The mortality in version is no higher than in any other method of delivery. There should be no morbidity in versions. In version the woman has the first stage of labor only; there is no second stage to the delivery. Following delivery by version the patient is put on her stomach in the second 24 hours. On the 8th day she is placed in the knee-chest position for ten minutes. On the 10th day she gets up and on the 13th day goes home. Sometimes patients go home on the 12th day. There is less lochia and no ballooning of the uterus. Some people have said that the mother cannot nurse the baby because there is no second stage of delivery. I wish to say that version has no effect on the milk.

The baby is weighed at birth and every day until it leaves the hospital. We find that they get the birth weight back quicker than other babies and they leave the hospital on the 13th day with a considerable increase of the birth weight. As to injury to the child, in doing 4000 versions I have broken one arm in a live baby. This case was one of a big baby and a small pelvis. I have twice broken the arms of dead babies in the interest of the mother and when I knew the baby was dead. There are fewer lacerations with properly performed version than any other method. I do no episiotomies. At the present time I do not believe that labor should be induced. No cystocele and no rectocele follows version.

DISCUSSION

DR. O. G. PFAFF, Indianapolis, Indiana—From the standpoint of most of us, version is a revolutionary proceeding just as ovariotomy was in McDowell's time. One New York man has said that he did not believe version could be taught in medical colleges; that it was Dr. Potter's own skill and ingenuity that made it a success in his hands and that we could not teach anybody else to do it. In answer to this Dr. Potter said, "I will guarantee to teach anybody to do these things as well as I do." Not all medical students are skilled in major surgery and not all are skilled in obstetrics. Obstetrics is beginning to be a real specialty. The man who desires to become a specialist in obstetrics must equip himself to become a specialist. I would like to ask Dr. Potter if he can prove that there is no traumatism by ironing out the birth canal. If so I can see no objection to adopting Dr. Potter's version by the obstetrical specialist.

DR. A. M. MENDENHALL, Indianapolis, Indiana—I believe that version should be discussed from the standpoint of technique and indication. We have been taught in the past certain indications for version, among them face presentation, prolapsed cord, transverse presentation, occiput posterior presentation, eclampsia, etc. Such unusual indications are serious conditions. Dr. Potter has proven the right to a separate consideration of version. In most instances it has been done as a last resort. The indication back of version is the real consideration. Personally I feel that version should be a substitute for high forceps. High forceps is the most unsurgical of all surgical procedures. Dr. Potter anticipates trouble by going ahead with version. His method is distinct. The scapula should be well out before delivery of the arm. Dr. Potter goes contrary to all textbooks in regard to speed. His time is longer. The baby does not die in 8 minutes. The second stage is painless; there is no laceration, less necrosis, less shock to the mother and less injury to the baby. It has been shown at autopsy that 50 percent of still born babies die of head injury in spontaneous delivery. There are no third degree lacerations in delivery by version. It might be of interest to you to know that the fetal mortality for the year ending the first week of March, 1920, in Indianapolis was 3.6 percent; in Indiana, 3.8 percent; in Muncie, 6 percent; Dr. Potter, 2.3 percent.

DR. CHARLES MARVEL, Richmond, Indiana—For the last two or three years I have applied version to all malpositions in my work. In my mind it is a question as to whether all men should do version or not. I believe that version is for the man who is sure of his technique. Are all cases of obstetrics version? I believe that if version is done properly it is as safe as a normal delivery.

DR. M. C. SEXTON, Rushville, Indiana—Some time ago I had the pleasure of being in Buffalo and seeing Dr. Potter do some work. There were four cases, the first a woman of 28 years, second baby; the os was completely dilated; Dr. Potter after making the preliminary steps of his version said that the case could not be delivered by version as the os could not be dilated sufficiently; vigorous six and one-half pound baby was delivered by high forceps. Second case, primapara, age 37, delivery in 14 minutes. Third case was breach presentation; worked on baby after delivery about 30 minutes with intra-tracheal tube. Fourth case was right occipito posterior. Baby born dead before Dr. Potter reached the patient.

DR. H. F. BECKMAN, Indianapolis, Indiana—I am sure we are all impressed with Dr. Potter's analysis of his method and that we are all under great obligations for his coming before us and giving us what he has. Unfortunately the human mind is more intent upon taking up and grasping the dramatic than on grasping detail and painstaking small points. They are impressed with version but not so much impressed with what occurs before and following version. I would not advise version indiscriminately. The rigid asepsis and painstaking care under which version is done are points which should impress us rather than the point of version itself. This care and preparation which Dr. Potter has are not the result of version but of acumen and of keenness in detail.

DR. JANE KETCHAM, Indianapolis, Indiana—Some time ago I had a chance to try Dr. Potter's method. Patient was a negress weighing 250 pounds. She had been in labor a long time; this was the 16th pregnancy; she had a complete ventral hernia. Version such as Dr. Potter described was done. I think that version is a very good method of delivering a breach; it is easier than other methods. Surgical asepsis is very important. If there is not time to wait for complete dilatation of the cervix there will be trouble.

DR. C. J. ROTHSCHILD, Fort Wayne, Indiana—I would like to ask what Dr. Potter's method is in delivering twins.

DR. H. D. FAIR, Muncie, Indiana—Would like to ask if Dr. Potter makes a vaginal examination.

DR. H. A. DUEMLING, Fort Wayne, Indiana—I think it is well to consider the surgical aspect of obstetrics. It is of interest to surgeons to know what is going on in obstetrical work. Dr. Potter practices absolute cleanliness. Cleanliness plays an important role in mortality in obstetrics and in all other conditions we are called upon to treat.

DR. E. F. KISER, Indianapolis, Indiana—Shall we teach Dr. Potter's method in the medical schools? I cannot believe that this method has a place in the medical school.

DR. A. L. KANE, Fort Wayne, Indiana—Version has been taught in complicated cases as a matter of necessity. If all medical schools could be taught this it would be a valuable addition to the curriculum. Since version is a method of doing obstetrics I believe that this method should be taught in the medical schools.

DR. MILES F. PORTER, Fort Wayne, Indiana—I think it is only fair to call your attention once more to caution. Do not be stampeded by statistics. I still believe that chloroform is not the best anesthetic in obstetrics or any other branch of surgery. I cannot altogether accept that version is the ideal method for obstetrics in general practice. With all due respect to Dr. Potter, I must confess I am still "from Missouri" and considerable of a "doubting Thomas".

DR. L. P. DRAYER, Fort Wayne, Indiana—I wish to support Dr. Miles F. Porter's objection to chloroform. I do not advocate the use of chloroform in obstetrics or any other surgical procedure.

DR. WOOLERY, Bloomington, Indiana—I believe Dr. Potter has made a success of version because he has developed it to an art; it is his hobby. He does it with quietness, ease and skill because it has become an art with him.

DR. POTTER'S closing discussion:—I agree with Dr. Mendenhall that high forceps are things of the past. No one here can say how much trouble he has gotten away from by doing elective version. The method is increasing in popularity with the women. They consider favorably the elimination of the second stage and I think that after all it is the women that have the babies and a woman should have her choice of obstetrics. When I hear of a second stage lasting 24, 36, or 38 hours, it makes me sick. I can demonstrate this thing. I have given some men some ideas that they have carried away and developed. Any man with anything above the ears, any judgment

or obstetric training can school himself to do this work. I hope the time will never come when I cannot choose my method of delivering women. I must judge with the individual against the use of forceps. Another thing, a breach case is not a version. You cannot flex the head in a breach case. In version you have flexion and maintain it. If you lose it you are lost. The preparation is a very important thing. Preparation for anything is important. We do not have any post-partum infections. The temperature very rarely goes above 99.5 or 100 on our charts. I never want to see consultation cases. You are called in when an arm is hanging out and you are expected to carry the load of responsibility. Some people think you cannot do version in a primipara. It is as easy to do version in a primipara as in the majority of other cases. In delivering twins I try to lift the lower one up and get the anterior one. I am always very careful not to lock twins. This means death. I have delivered women by version without opening up the old scar. I make all vaginal examinations. I give no antepartum enemas. I do not care what you think about chloroform. Everyone is entitled to his own opinion as to anesthetics. I have one man who gives all my anesthetics. If you cannot have an anesthetist bring someone with you who can give the anesthetic. No man has any business to be an anesthetist, obstetrician and night watchman at one time. My anesthetist has given 3500 chloroform anesthetics with no trouble. I like chloroform because it is pleasant to take, quick in action and gives the most profound relaxation; the patient returns to consciousness very quickly. The general practitioner can do version.

Attendance 287.

Adjournment.

October 24, 1921

The weekly dinner meeting of the Muncie Academy was held at the Roberts Hotel at 6:15 p. m. October 24, 1921. The meeting was called to order by President Dr. B. R. Kirklin.

Dr. I. N. Trent announced the program of activity for the coming Cancer Prevention Week. All doctors of the Academy have signified their willingness to help carry out the program and a doctor has been appointed to speak at each church in the city on Sunday morning on the subject of Cancer Prevention.

Dr. Hollis, of Hartford City, outlined the plans for the program for Cancer Prevention Week to be carried out in Hartford City.

Dr. Moore, as chairman of the Program Committee, gave the program for future meetings as follows: November 4th, joint meeting of the Muncie Academy of Medicine and Delaware-Blackford Medical Society with program on the subject of Control of Cancer; November 11th, program by internes of the Long Hospital, Indianapolis; November 18th, Dr. A. C. Kimberlin, of Indianapolis, "The Psychic Control of Cardio Vascular Patients."

The address of the evening was given by Dr. Martin Fischer, of Cincinnati, his subject being "Arterio-Sclerosis".

Synopsis:—In considering the subject of arterio-sclerosis, we should go over the evidence of the last thirty or forty years and see if there is not a better and more hopeful way of treating arterio-sclerosis. Arterio-sclerosis is a name which I wish to simplify by the term "vascular disease". Arterio-sclerosis means a thickening of the arteries. Two things greatly determine the diagnosis of arterio-sclerosis. One is the anatomic thickening of the arteries and veins. The other thing is increased blood pressure. To the two signs and symptoms which are characteristic of vascular disease another may be added, but it is not a part of the disease but a consequence. This symptom is cardiac hypertrophy. One cause for the lessening of elasticity of the vessels may be due to spasm. The less elasticity the narrower the artery. As a consequence there is an increased amount of work for the heart and the extra work results in hypertrophy of the heart. But hypertrophy of the heart in itself is not a bad thing. I believe that prominent among the causes of vascular disease are hard work and worry. Alcoholism used to be another cause. Some of these things are bad, but I do not think any one of them ever gave vascular disease to anybody. The lesions of vascular disease are always spotty, even in the advanced stage. High blood pressure and vascular disease are due to infection. It has been found that when rabbits are fed a diet of adrenal gland and spleen they develop a high blood pressure which can be maintained for months and months. These animals do not develop vascular lesions. Hypertrophy of the heart as a cause of vascular disease is plain bunk. It is only a sign and a consequence of vascular disease in the blood vessels. The treatment depends on which branch is affected and on the origin in which the lesions occur. Vascular disease is not a disease of the large but of the small blood vessels or capillaries. Depending on where we get these lesions we have anemia of that part, and if there is no possibility of re-establishing the blood supply of the part, the part dies. The most significant lesions are those of the brain and kidney. The insane are for the most part products of slow going vascular disease of the brain. Glaucoma is nothing but edema of the eye ball due to deficient arterial blood supply to the eye. When vascular disease affects the kidney we have a small red kidney which looks healthy but you will find small spots of gray which are characteristic of vascular disease.

We have been taught in text books that vascular disease goes with a normal or increased water output. The amount of albumin and casts are significant of kidney disease. When an arterio-sclerosis patient comes to you with a normal water output, put it down he has a good kidney. If there are casts and albumin he has a little spot in the kidney. A practical point is that you only need one-half of one kidney to have a normal water output. We have animals that have lived years and years with only one-half of one kidney. Bright's disease is arterio-sclerotic change in the kidney. Bright's original book is the best article I have ever read on the subject. He recognized that the first cause of kidney disease was arterio-sclerotic change. Arterio-sclerosis is due to infection. I do not advocate the use of too much adrenalin in local anesthetics. I believe that bleeding is the thing to do in some cases.

The discussion was led by Dr. Ritchey of the Long Hospital, Indianapolis. Others taking part in the discussion were Drs. Beall, of Fort Wayne; Spurgeon, of Muncie; Marvel, of Richmond; Krebs, of Huntington; Good, of Huntington, nad Sellers, of Hartford City.

Attendance 208.

Adjournment.

R. A. BEESON, Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

ACNE COMBINED VACCINE-LEDERLE.—A suspension of killed acne bacilli and killed Staphylococcus albus and Staphylococcus aureus. For a discussion of Mixed Bacterial Vaccines, see New and Nonofficial Remedies 1921, p. 314. Acne Combined Vaccine-Lederle is marketed in various size packages containing graduated doses of the vaccine. Lederle Antitoxin Laboratories, New York.—(*Jour. A. M. A.*, Oct. 1, 1921, p. 1103).

PROTOLAC.—A brand of calcium caseinate-N. N. R. For a description of the composition, actions and uses, and dosage, see *Jour. A. M. A.*, Sept. 24, 1921, p. 1023. Dry Milk Co., New York.

BENZYL SUCCINATE-SEYDEL.—A brand of benzyl succinate-N. N. R. For a description of the properties, actions and uses, and dosage, see *Jour. A. M. A.*, Sept. 24, 1921, p. 1023. Seydel Manufacturing Co., Jersey City, N. J.—(*Jour. A. M. A.*, Oct. 8, 1921, p. 1183).

COPPER CITRATE-P. W. R.—A brand of copper citrate-N. N. R. For a discussion of the actions, uses and dosage of copper citrate, see New and Nonofficial Remedies 1921, p. 88. Powers-Weightman-Rosengarten Co., Philadelphia.

MERCURY BENZOATE-P. W. R.—A brand of mercuric benzoate-N. N. R. For a discussion of the actions, uses and dosage of mercuric benzoate, see New and Nonofficial Remedies 1921, p. 192. Powers-Weightman-Rosengarten Co., Philadelphia.

MERCURY CYANIDE-P. W. R.—A brand of mercuric cyanide-N. N. R. For a discussion of the actions, uses and dosage of mercuric cyanide, see New and Nonofficial Remedies 1921, p. 183. Powers-Weightman-Rosengarten Co., Philadelphia.

MERCURY SUCCINIMIDE-P. W. R.—A brand of mercuric succinimide-N. N. R. For a discussion of the actions, uses and dosage of mercuric succinimide see New and Nonofficial Remedies 1921, p. 196. Powers-Weightman-Rosengarten Co., Philadelphia.

SILVER CITRATE-P. W. R.—A brand of silver citrate-N. N. R. For a discussion of the actions, uses and dosage of silver citrate, see New and Nonofficial Remedies 1921, p. 333. Powers-Weightman-Rosengarten Co., Philadelphia.

SILVER LACTATE-P. W. R.—A brand of silver lactate-N. N. R. For a discussion of the actions, uses and dosage of silver lactate, see New and Nonofficial Remedies 1921, p. 334. Powers-Weightman-Rosengarten Co., Philadelphia.

PROCAINE-ADRENALIN HYPODERMIC TABLETS NO. 2.—Each contains procaine-Abbott (see New and Nonofficial Remedies 1921, p. 34) 0.02 gm. (1-3 grain), adrenalin 0.00004 gm. (1-1500 grain) and sodium chloride, sufficient so that when the tablet is dissolved in 1 Cc. of water the resulting solution is isotonic. The Abbott Laboratories, Chicago.—(*Jour. A. M. A.*, Oct. 29, 1921, p. 1423).

PROPAGANDA FOR REFORM

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the therapeutic claims advanced for them were held to be false: Joyner's Gui-A-Col Compound (William-Ellis Drug Co.), consisting essentially of guaiacol, an iodid, sugar, alcohol, and water, and falsely labeled as a remedy for consumption, whooping cough, and all affections of the throat, chest and lungs. Egyptian Regulator Tea (Kells Co.), consisting essentially of senna, coriander, dog grass, ginger, taraxacum, sambucus, licorice and cinnamon, and claimed to be a speedy relief for dyspepsia, liver complaint, headache and nervousness. Nervosex Tablets (United Laboratories Co.), consisting essentially of strychnine, phosphates, and iron, zinc and calcium salts, and claimed to be a nerve and muscle stimulant. Falsely labeled a compound of nerve and muscle stimulants for low vitality, lack of energy and sexual weakness. Castalian Natural Mineral Water (J. P. Forbes & Co.), recommended for rheumatism, Bright's disease, dyspepsia, diphtheria and other conditions. Man's Capsules (Man's Capsule Co.), consisting essentially of cubebs and copaiba and sold as a remedy for gonorrhea and gleet.—(*Jour. A. M. A.*, Oct. 1, 1921, p. 1119).

PATENT MEDICINES IN ENGLAND.—Broadly speaking, the ethical standards of the "patent medicine" industry in Great Britain in 1921 is that which obtained in the American "patent medicine" industry prior to the passage of the Food and Drugs Act in 1907. As long ago as 1912 the British Parliament created a Select Committee on "Patent Medicines". The Committee published a report in 1914. The coming of the World War favored the nostrum interests and no legislative action was taken until 1920, when a Proprietary Medicine Bill was introduced into the House of Lords. Now comes the Medical Press and Circular (London) complaining that the bill has been pigeonholed. This publication points out that in 1920 the British government received revenue from the sale of "patent medicines" totaling 1,332,661 pounds, and that the very fact that a government hard up for revenue should be able to obtain so vast a sum from a business so largely tinctured with fraud and such a menace to the public health may be "a sufficient reason" in explanation of the British government's attitude of "innocuous desuetude" toward this bill.—(*Jour. A. M. A.*, Oct. 1, 1921, p. 1107).

TOXICIDE NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry reports that Toxicide (Toxicide Laboratories, Chicago) is alleged to be a remedy which "increases systemic resistance * * * used for immunizing against septic infections * * * is indicated in any case of septic infection, capable of inducing inflammation and pus formation, regardless of location or kind of tissue involved". The manufacturer informed the Council that "Toxicide contains Lachesis 12x, Tarantula 6x, Psorinum (special) 15x, Silica 6x and Excipient q. s. (the excipient is sweet milk) * * * These remedies are combined in the sweet milk and put through a process of development, which produces the curative agent which we call 'Toxicide'." No information was given as to the proportions, either relative or actual, of the ingredients nor was any information given as to the "process of development" to which the mixture is subjected. Neither was any evidence submitted to the Council for the highly improbable claims of curative effect which are made for Toxicide. The Council declared Toxicide inadmissible to New and Nonofficial Remedies because: (1) The identity and amount of the potent constituent or constituents have not been furnished; (2) the preparation is advertised indirectly to the public; (3) the name "Toxicide" is therapeutically suggestive, and (4) the therapeutic claims, being unsubstantiated by evidence, are unwarranted.—(*Jour. A. M. A.*, Oct. 8, 1921, p. 1197).

TIRED RABBITS FOR DIABETES AND RING-TAILED MONKEYS FOR SEX STIMULATION.—In March, 1919, an article by T. Webster Edgar appeared in the *New York Medical Journal* in which Edgar stated that he had treated successfully twenty cases of definite diabetes with intramuscular injections of his diabetic serum. No information was given regarding the serum except that it was prepared from normal blood after the animal is exercised to the point of fatigue. Subsequently newspaper articles appeared in which Edgar is quoted as using the blood of rabbits first placed on a treadmill to produce fatigue. In November, 1920, an article by Edgar appeared in the *New York Medical Journal* on "Sterility, Sex Stimulation and Endocrines" in which he stated that he was interested

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BALTIMORE

(Continued from page 404)

in sex stimulation and that he had a serum which he was using with success in this condition. During the last year newspapers have carried sporadic reports of alleged remarkable results produced by Dr. Thomas Webster Edgar of New York through the transplantation of "interstitial gland" taken from "a special species of orangoutang". In a letter to a layman Edgar stated that the treatment was successful and that he was now treating all cases by this method, and that the fee for the operation was five hundred dollars inclusive of the sanitarium. Commencing Sunday, Oct. 1, 1921, a series of sensational articles appeared regarding one of Edgar's alleged monkey-gland implantations. The material is played up in the style typical of yellow journalism. The statement that appeared in these articles to the effect that Edgar "is a member of the County Medical Society of New York" is incorrect. Edgar is not a member. The newspaper claim that Edgar is "an authority on glandular transplantation" should be accepted with reservations.—(*Jour. A. M. A.*, Oct. 15, 1921, p. 1272).

PIL MIXED TREATMENT (CHICHESTER).—This is a proprietary preparation of the Hillside Chemical Co., Newburgh, N. Y., sold in the form of pills, each said to contain 1-20 grain of mercuric iodid and 5 grains potassium iodid. The Council on Pharmacy and Chemistry reports that in 1907 the therapeutic claims advanced for the preparation were examined and found to be unwarranted, exaggerated and misleading. Misleading statements were also made for the product itself. The Council holds that the use of Pil Mixed Treatment (Chichester) is on a par with the use of certain blood purifiers which were advocated at a time when the treatment of syphilis was a baffling problem. It reports that the present day advertising, which reads as if it had been written in the heyday of proprietary license, is, in effect, an invitation to treat syphilis in its various stages and manifestations with Pil Mixed Treatment (Chichester). If heeded by those who read the advertising, it will result in much harm to the public and the profession. For this reason the present report of the Council is published as a protest against any advertising propaganda advocating the routine treatment of a disease which requires that each case be studied carefully so that prompt and efficient measures may be applied to the various manifestations of the disease.—(*Jour. A. M. A.*, Oct. 22, 1921, p. 1355).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the therapeutic claims advanced for them were held to be false: Euca-Mul (Edward G. Binz Co.), consisting essentially of oil of eucalyptus, sugars, glycerin, gum, water and alcohol, and claimed to relieve bronchial asthma, and to be effective in coughs of phthisis and whooping cough. Kalina Tablets (J. M. Rutkowski and Kalina Co.), consisting essentially of plant extractives, including cascara, aloes, pepper and strychnin, and sold as a health restorer, blood purifier, etc. Howell's Lymphine Tablets (Chas. H. Howell & Co.), pills consisting essentially of ferrous carbonate, nux vomica, aloes and phosphorus, and claimed to relieve all forms of weakness, etc. Wampole's Phosphorus, Nux and Damiana (Henry S. Wampole Co., Baltimore), consisting of the three drugs named, and recommended for impotence, insomnia, hysteria and diseases of the brain of both sexes.—(*Jour. A. M. A.*, Oct. 29, 1921, p. 1438).

CONVERSE TREATMENT FOR EPILEPSY.—An examination of this preparation in the A. M. A. Chemical Laboratory in 1916 showed that essentially each 100 Cc. of the preparation contained about 7.3 gm. ammonium bromid, 5 gm. calcium bromid and 8.7 gm. potassium bromid. Calculating from the bromid determination, each dose of one teaspoonful (1 fluidrachm) contains the equivalent of 14.5 grains of potassium bromide or each daily dose (4 teaspoonfuls) corresponds to 58 grains potassium bromid.—(*Jour. A. M. A.*, Oct. 29, 1921, p. 1440).

MICAJAH'S UTERINE WAFERS.—Micajah's Medicated Wafers (formerly called Micajah's Medicated Uterine Wafers) were analyzed in the A. M. A. Chemical Laboratory in 1910, and found to consist essentially of dried "burnt" alum, boric acid and borax. In 1919 the Council on Pharmacy and Chemistry in reporting on this product showed that whatever virtues might be possessed by the proprietary are those inherent in such well known astringents as alum, boric acid and borax. Micajah's Medicated Wafers are an excellent example of mischievous proprietary medicines. Physicians who use this will be likely to overlook or pass over new growths, specific infections and diseases that require radical remedial measures.—(*Jour. A. M. A.*, Oct. 29, 1921, p. 1441).

SAL HEPATICA.—Little information is given, or apparently ever has been given, by the proprietors (The Bristol-Myers Co.), in regard to the composition of Sal Hepatica. Some years ago medical journal advertisements contained the statement that it contained all the "Tonic, Alterative and Laxative Salts of the celebrated 'Bitter Waters' of Europe * * * fortified by the addition of Lithium and Sodium Phosphates". It has also been claimed that Sal Hepatica is "a saline combination with the addition of Sodium Phosphate and Lithia Citrate".

The label of a recently purchased specimen contained the declaration, "Sal Hepatica is an effervescent saline combination possessing medicinal properties similar to the natural 'Bitter Waters' of Europe, and fortified by the addition of Sodium Phosphate". In view of these indefinite statements the A. M. A. Chemical Laboratory made an analysis of the product. The analysis showed it to have the following composition: Sodium phosphate anhydrous 4.4 percent, sodium sulphate anhydrous 26.5 percent, sodium tartrate anhydrous 12.7 percent, sodium bicarbonate 19.5 percent, tartaric acid (free) 20.8 percent, sodium chloride 8.9 percent, lithium phosphate trace, water of hydration (by difference) 7.2 percent. Sal Hepatica, therefore, is essentially an effervescing mixture of dried sodium sulphate and sodium tartrate with a little dried sodium phosphate and table salt added. Sal Hepatica, then, is a simple effervescent saline laxative. It is essentially secret in composition and is sold under claims that would be laughed at were the full formula of the product a matter of public knowledge.—(*Jour. A. M. A.*, Oct. 29, 1921, p. 1438).

A certain little girl, convalescing from a childish ailment, wanted something to eat, and as is usual with little people, wanted it at once, she demanded it again in an imperative voice.

"Wait a moment, you little impatient!" nurse answered.

"I ain't a him-patient," was the indignant retort. "I'm a she-patient."—*London Answers.*

"Oh, Freddie, don't you think you've had enough ice cream?" asked Aunt Mary, after helping him a second time.

"No; I don't feel sick yet."

Medical L

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Next Annual Session, Muncie, September 27, 28, 29, 1922. List of Officers and Committees on Adv. Page 2.
Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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ORIGINAL ARTICLES

ULCER OF THE STOMACH AND DUODENUM

ETIOLOGY AND PATHOLOGY*

B. W. RHAMY, M.D.
FORT WAYNE, INDIANA

Simple ulcer of the stomach was first described by Cruveilier in 1830 and his description serves admirably today.

Ulcers are usually solitary, may occur in any portion of the stomach, but are usually found at the points subjected to the greatest irritation; namely, in the lesser curvature, in the posterior wall, and near the pylorus. Ulcers may be round, oval or irregular and vary in size from a pin head to a pancake. They may have a superficial saucer shape, be a deep irregular funnel, or a clean punched out hole. Occasionally one is found with the large end of the funnel toward the peritoneum. The edges in acute ulcer are soft but in the chronic type are indurated as the result of inflammatory and scar tissue. The mucous membrane around them may be reddened from inflammation while the rest of the stomach shows a chronic catarrhal inflammation. The exposed surface of the ulcer is usually a grayish brown from changed blood and the replacement fibrosis brought about by the constant tendency of the ulcer to heal. Commencing in the mucous membrane, ulcers gradually extend through the coats of the stomach and in this process blood vessels are eroded, causing more or less severe hemorrhages.

Finally, the peritoneal coat may be perforated, causing peritonitis. Nature attempts to block this process through localized peritonitis which forms protective adhesions, tending to plug up any perforations with some contiguous abdominal structure, usually the pancreas or liver. This contiguous structure then becomes the base of the ulcer; and in turn, may be penetrated by the ulcerative process, producing abscess, inflammation and fistulæ. Instances have occurred where the bowel, being the structure plastered to the ulcer, has been perforated, forming a natural gastro-enterostomy. According to Brinton, adhesions to adjacent abdominal organs occurs in about 40 percent of cases, and perforations in about 13 percent. Over half of all ulcers heal spontaneously, forming dense scar tissue, which is not only apt to be the seat of new ulceration, but to produce marked deformity in the form of pyloric obstruction, or hour glass stomach, depending on the location. In such recurring ulcers the tendency to hemorrhage and perforation is greater than in the primary ulcer.

Statistics give the site of peptic ulcers about as follows: In the lesser curvature about 30 percent, the posterior wall 38 percent, at the pylorus 16 percent, in the anterior wall 6 percent, at the cardia 4 percent, the fundus 3 percent and in the greater curvature 3 percent. As to the frequency, between 4 and 5 percent of all postmortems show healed or unhealed peptic ulcers, of which about 80 percent are solitary and about 20 percent multiple. Howard analyzed the statistics of 161,599 patients treated in American hospitals and found 930 instances or .57 percent in which ulcer was present. Statistics from European hospitals give about 1.3 percent. Duodenal or juxtapyloric ulcers, *i. e.*, those occurring within 1½ inches of the pylorus or above the opening of the common duct, must be considered as peptic ulcers, since they are bathed by unchanged acid chyme before it is neutralized by the alkaline secretions in the duodenum. Peptic ulcers are found beyond the pylorus at least twice as frequently as in the stomach. The Mayo Clinic in 2,500 cases operated, found duodenal ulcers 73 percent to stomach ulcers 23 percent. Males are more susceptible than females in about the proportion of 4 to 1. The ulcer age is between 17 and 40 years, although ulcers of the acute type have been found in children, even in very young babes, Gargot reporting one in a babe 30 hours after birth. Cackovic in 172 operative cases found 2.32 percent who were under the age of 10 years.

*One of the papers of a symposium presented before the Indiana State Medical Association, Indianapolis Session, September, 1921.

Etiology. Obviously the normal gastric mucosa is naturally resistant to normal gastric juice, indeed it may be accepted as true that almost any *living* tissue possesses the power of resisting digestion, probably by means of antiferments, and that this power is most in evidence in the gastric mucosa. The essential pre-ulcer change, therefore, must be one that either renders a localized area of mucosa abnormally susceptible to the action of acid gastric juice, or one that causes necrosis and sloughing independent of any action of the gastric juice. Among the most important possible etiologic factors about which theories have been built are: the effect of long continued trauma from coarse foods, coupled with the action of acid gastric juice, impaired blood supply, impaired nerve supply, and bacterial infection.

Vascular Factors. In favor of the vascular origin has been mentioned the localized punched out character of ulcers as indicating either a localized thrombosis or an endarteritis obliterans with necrosis and digestion of the resulting infarct. Ulcers as the result of thrombosis have been produced experimentally in animals by the injection of chemicals into the small blood vessels of the stomach. On the other hand, it has been pointed out that in youth, where ulcers have formed as the result of infection and embolism, they were of the acute type and healed readily. Microscopic examination of the blood vessels immediately adjacent to an ulcer frequently shows occlusion by thrombosis and endarteritis, but again, as these pathologic changes are always found in an ulcerative process, they must be regarded as most apt to be of the secondary variety, *i. e.*, protective thrombi, etc. Reeves, *Surg. Gyn. and Obst.* Apr. 1920, found that in the area of predilection for ulcer formation, *i. e.*, on both sides of the pylorus, the blood supply is not as free as in other parts of the stomach, as the arteries are fewer in number, smaller, longer and make fewer anastomoses. He advanced the idea that these circumstances make an occlusion of one of these vessels a more important factor in the production of ulcer than if there were free anastomosis.

Nervous Factors. Ulcer of the stomach has been induced experimentally through interference with the nerve supply, by section of either the vagus, sympathetic, or the spinal cord. As ulcer is associated with spasms of parts of the stomach, it has been argued that this nerve section caused localized anemia, by spasm of smooth muscle compressing the arteries of the mucosa. Reflex irritation of the nerves of the stomach from appendicitis or other abdominal diseases has also been advanced as a possible cause of ulcer. Hurst believes that the association of chronic appendicitis with gastric and duodenal ulcer is too common to be a coincidence; and that the greatly diminished tendency to relapse, especially of acute ulcers, following removal of the appendix, but without interference with the ulcer, proves the appendix to be the primary condition. He is also convinced that excessive smoking, through its effect on the autonomic nervous system, by increasing hypertonus and inducing hypersecretion, promotes ulceration. It is, however, a mooted question as to whether appendicitis might cause ulcer by reflex nerve irritation, or as a primary focus of infection.

Hurst is convinced that "it is a peculiar type of stomach or duodenum that develops ulcer, since the primary causes of irritation do not commonly affect the normal stomach". It seems possible that just as one type of individual may have epilepsy and another migraine, so still another type may be subject to peptic ulcer. Wolff, in *Hygea-Stockholm* Aug. 21, 1920, refers the symptoms of peptic ulcer, *i. e.*, pains, gastro-spasm, hypersecretion and contraction of the mucous membrane and its blood vessels, as a manifestation of overactivity of the vagus nervous system, and suggested the use of atropin. Von Arnstel has reported 50 cases in which .5 to 1 mg. of atropin sulphate was given daily for 10 weeks with marked diminution of the symptoms. Moynihan noted in his patients that attacks were more frequent and prolonged in winter and were brought on by dietary indiscretions, overwork, worry and exposure, all of which might act through the nerves or by lowering the general resistance.

Trauma. In considering the effects of trauma from foods, etc., it may be said that ulcer is extremely rare compared with the frequency of the exciting causes, which argues that injury is unlikely unless the vitality of the mucosa is already lowered by some means. The following points stand out in reference to trauma: Ulcers are prone to appear in the lower end of the stomach, which is the most active part, longest in contact with the acid chyme and longest subjected to irritation of partly digested and irritating foods, such as alcohol, vinegar, fruit acids, mustard, peppers, seeds, skins and fibres of nuts, fruits and vegetables passing into the duodenum. Abrasions, erosions or acute ulcers may form in consequence, and these same factors of irritation would tend to prevent healing, making chronicity possible. Bacterial infection of such damaged tissue probably always occurs and this in turn would cause congestion and edema, further factors favorable to devitalization. Such devitalized infected tissue would afford little resistance to digestion. Barcley and Hurst, *Brit. Med. Jour.* Apr. 24, 1920, in experiments on animals, found that an exposed acute ulcer would heal in from 12 to 20 days,

but by rubbing them daily with coarse foods such as might go into the stomach, they prolonged the healing to from 30 to 52 days in 11 cases so treated.

Of interest in discussing the possibility of trauma in the etiology of peptic ulcer is the discussion by Terry, *Jour. A. M. A.* July 24, 1920, on ulcers of the jejunum following gastro-enterostomy in which the primary cause is ascribed to trauma by instruments, non-absorbable sutures and buttons, the tissue thus traumatized being digested by the acid chyme. Improper food and insufficient mastication are common faults and may early in life begin to pervert the functions of digestion and set up chronic gastritis with stasis of the lymphatics. It is possible that this early abuse of physiologic function may lay the foundation for ulcerative processes.

Barcley and Hurst found that the stomach in duodenal ulcer was hypertonic, *i. e.*, hanging high up and consequently emptied rapidly, so that the first part of the duodenum was constantly in contact with exceptionally acid juice. In gastric ulcer, the stomach was hypotonic, *i. e.*, hung low, and in consequence emptied slowly, the acid chyme remaining long in the stomach and only a little at a time going into the duodenum.

Hyperchlorhydria in Ulcer. The conception of hyperchlorhydria as the primary etiologic factor of peptic ulcer has long been prevalent. Moynihan at one time promulgated the rule that chronic hyperacidity was in practically all cases a definite indication of ulcer. Recently much experimental laboratory and clinical evidence has been offered to disprove this principle, the most radical being that hyperacidity was either a complicating incident or was secondary and due to reflex irritation from the ulcer or its products. That there is a relationship between hyperacidity and ulcer is shown first by the fact that hyperacidity is the rule in peptic ulcer, and second by the fact that the majority of round ulcers occur in areas most exposed to acid secretions, namely, on either side of the pylorus.

Although hypo-acidity has been found in ulcer and conversely hyperacidity in non-ulcer cases, from my own observation I would suggest that many of the cases showing hypo or anacidity probably had a hyperacidity in the pre-ulcer period. In practically all cases of ulcer coming under my observation, hyperacidity was a prominent symptom, and when hypo or anacidity was present, history of previous hyperacidity could be elicited. The pathologic changes as I see them are these: first a chronic hyperacidity during the formative stage of the ulcer. In the course of years of a continuous or recurrent ulcerative process, the continued irritation, indurative inflammatory processes, etc., with the accompanying gastritis, may gradually bring about a loss of gastric function characterized principally by reduction in the acid content of the gastric juice. This stage of hypo or anacidity I consider to be a pre-cancer stage during which the ulcerative process is very apt to be transformed into a malignancy.

Smithies, *Jour. A. M. A.*, June 5, 1921, says experimental introduction of high acid values, even as much as ten times the normal amount, failed to damage the normal mucosa, and quotes Carlson "that introduction of acid in cases of ulcer does not produce clinical discomfort". As to the value of this observation I have serious doubts, first because a few introductions of acid cannot be compared to the insidious effect of the long continued and constant irritation of hyper acid gastric juice, and second in my own experience it has been an observation common to all ulcer cases that they avoided acid foods on account of discomfort. In Smithies's records of 2,168 proved ulcers, 33.4 percent had hyperacidity, 41 percent normal acidity, 23 percent subacidity and 2.6 percent anacidity. Eggleston, however, *Jour. A. M. A.*, Dec. 4, 1920, in 500 cases found 73 percent having hyperacidity, 14 percent normal acidity, 11 percent hypoacidity and 2 percent anacidity, while Gongolez, *Siglo Medica Madrid,* May 1, 1920, in 715 positive cases of ulcer noted 96.2 percent with hyperacidity. He claimed that the treatment which cures ulcer also cures hyperacidity, and that this is a further argument in favor of the association of hyperacidity and ulcer. From these figures it can be safely concluded that at least the majority have hyperacidity. The fact that in perforated ulcers plastered up by some adjacent organ like the liver, the ulcerative process may extend into this adjacent tissue, is in my mind proof conclusive that the eroding action is digestive in character.

Cellular Toxins. Brief mention may be made of the theory of cellular toxins. Turck has stated (see Lewishon, *Jour. A. M. A.*, Aug. 6, 1921) that by causing tissue breakdown in animals, tissue toxins were liberated, causing the development of ulcers in 36 cases. This he thinks was brought about when the animal, losing its protective power against its own tissue toxins, a stasis in the blood vessels of the mucosa occurred. Jona, *Med. Jour. of Australia,* March 2, 1918, prepared extracts of burnt tissues using liver, placenta, spleen and muscle tissue and injected these extracts into animals. He concluded that these injections caused inhibition of gastro-intestinal secretions, and believed this to be a potent factor in the causation of duodenal ulcers after burns.

Theory of Bacterial Infection. The infectious origin of ulcer has had advocates for many

years. Experimentally ulcer has been produced by intravenous injections of pus, of bac. pyocyaneus, bac. dysentery, bac. coli, lactic acid bacillus, pneumococcus, staphylococcus and streptococcus. Rosenow, *Jour. Inf. Dis.,* September, 1918, has reported a strain of streptococcus which he claimed has an elective localizing affinity for the mucosa cells, the injection of which produced chronic ulcers. Bacteria of various kinds have been found in ulcer walls, and as the initial lesions of ulcer are localized necrosis, localized hemorrhage and inflammation of the lymph follicles, it has been pointed out that the common cause of local necrosis anywhere is bacterial infection, acting either locally or by means of their toxins in the blood stream, which by destroying the endothelial cells of the capillaries pave the way for the local destructive action.

Infection of one or more of the lymphatic follicles so thickly studded along the lesser curvature, especially toward the pylorus, may give rise to a sub-mucous abscess which by rupture allows the gastric juice to act on the base of the ulceration thus exposed. Clinically, ulcer has been noted in connection with various infective processes, as diseased tonsils, infected appendix, gall bladder infection and infected teeth. Rosenow believed germs from an infected mouth affected the stomach mucosa by way of the blood stream rather than by swallowing. As variations of the theme of infectious origin Askanazy, *Revue Medicale de la Suisse Romande-Geneva,* August, 1920, found the fungus oidium albicans constantly present in his ulcer cases, and noted in his experiments that this fungus grows best in acid media. To this fungus he ascribes the infection and advises combating the infection and thus curing the ulcer by neutralizing the acid favorable to their growth. Mongorge, *Lyon Medical,* May 25, 1920, on the ground that Jaksch and Brinton have asserted, that 25 percent of ulcer cases die of tuberculosis; and assuming that ulcer is a toxic-infectious disease; and as tuberculosis is the toxi-infectious disease par excellence, therefore he argues, round ulcer must be often of tuberculous origin. He cites ten cases of this kind.

The Role of Syphilis in Peptic Ulcer. It is rather surprising how little attention has been given to syphilis in the study of diseases of the stomach. Only within the last three or four years has serious attention been given to this problem, authorities having previously passed the subject by with the brief statement that syphilis of the stomach was rare. The prevalence of lues and its widespread activities throughout the body make it manifestly an impossibility that the stomach should escape damage. Furthermore, it is an erroneous idea to conceive syphilis of the stomach only as a gummatous lesion, for it is a well known fact that the spirocheta pallida is a connective tissue parasite, and since the walls of the stomach contain much connective tissue, interstitial inflammation is possible.

Syphilis of the stomach, as one writer remarks, forms a fascinating problem, there being no clear cut symptomatology and no certain clinical findings to differentiate luetic gastric lesions from any other. The diagnosis can only be made by exclusion, and therefore no examination of gastric disease is complete that does not consider syphilis and include a Wasserman test. By so doing, within the last three or four years, more cases of syphilis of the stomach have been reported than had been previously in the history of medicine. There are two ways in which syphilis may affect the stomach: first, by a definite lesion in the form of a gumma, or an interstitial inflammation; and, second, as a part of a widespread manifestation such as arterio-sclerosis or disease of the nervous system. Therefore, although it is possible for a patient to have syphilis and his stomach not be luetic, yet if definite improvement of the gastric condition occurs under luetic treatment, it can be safely assumed that it is of luetic origin, especially if ordinary treatment had previously failed. Syphilitic ulcers of the stomach have in the past been conceived only as broken down gumma, yet there is no reason why syphilis cannot, through an endarteritis obliterans, an arterio-sclerosis, or a degenerative process in a nerve ending, produce a localized devitalized area subject to digestion by gastric juice, in the same manner as has been ascribed to other infectious organisms.

Smithies, *Am. Jour. Syph.,* January, 1917, describes syphilitic infection of the stomach wall first as a dense round cell infiltration of the loose areolar tissue. From this, four types of lesion may develop, (1) diffuse infiltrations causing thickening of the wall, (2) localized dense round cell groupings which may end, as miliary gummas, or coalesce, necrose and slough forming ulcers, (3) inflammatory nodules producing definite tumefaction, and (4) parigastritis with adhesions. The clinical manifestations from these pathological variations would be chronic gastritis, ulceration, tumor and perigastritis. Smithies reports 34 cases of gastric disease with positive Wassermans, of which 18.2 percent were found to have gastric ulcer and 41 percent duodenal ulcer. Other observers report anywhere from 3 percent to 10 percent of their gastric cases as luetic. In my laboratory I have definite records of 55 cases of peptic ulcer, of which 16 or 29 percent showed positive Wassermanns and responded to anti-luetic treatment.

Two other cases which gave two negative Wassermanns also responded to anti-luetic treatment.

Conclusion. A study of the literature on these various theories brings out the startling fact that each theory has been definitely proven by laboratory and clinical experiments. Summing all the evidence up one might draw the conclusion that whatever experimental means was used the general result was a *lowered resistance,* and that coarse foods and the gastric juice did the rest.

Most writers agree that two factors enter into the etiology: first, there must be a localized loss of vitality or resistance, whether it be circulatory, traumatic or trophic, and whether these disturbances be caused by bacteria, hyperacidity, spirocheta pallida or toxins; and, second, that given such a vulnerable area of mucosa, an active gastric juice, usually but not necessarily hyperacid, brings about the formation of peptic ulcer by its digestive action.

Peptic ulcer is then a local disease brought about by a systemic disturbance causing local manifestations including lowered resistance, and blood stasis; second, the irritation of coarse foods abrading the devitalized area; and, third, the corroding action of the gastric juice.

Finally, in studying an individual case, all these factors must be kept in mind, particularly syphilis, and no examination of any gastro-intestinal lesion should be considered complete without a Wassermann test. When the time arrives when this has become a routine part of the examination, the statistics, in my opinion, will show a marked increase in luetic percentages.

ULCER OF THE STOMACH AND DUODENUM

DIAGNOSIS AND TREATMENT*

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The upper end of the gastro-intestinal tract from cardia to jejenum, including bile passages, liver and pancreas, are closely related embryologically, and are richly supplied with splanchnic and vagus fibers, so that irritating lesions in any of these structures would readily modify the function of those portions most active and most subject to change, viz., stomach and duodenum.

For the same reason the stomach and duodenum are very susceptible to functional or organic disturbances in other portions of the tube, and in other viscera, and to reflexes physical, nervous or psychic. Likewise because of their embryological development in the center of the abdomen, the mind refers visceral pain to the midline, besides, from early childhood we have been taught to localize abdominal pain in the "stomach". These facts may explain the very common localization of abdominal visceral pain in the epigastrium, and the similarity of visceral symptoms in gastric and duodenal ulcer and in lesions of the bile ducts, liver, pancreas and other viscera, and in reflex influences.

While the ordinary somatic stimuli applied to the viscera and to visceral lesions are not adequate to produce the sensation of pain in the viscera, yet the natural stimulus to which the viscera are subjected, viz., adequate tension, or distension plus tone, produces a sensation of fullness if a certain degree of tension is slowly produced, or the sensation of pain if the same adequate tension is rapidly produced. It would thus seem that the stimulus for visceral distress or pain is adequate tension on the fibers of the muscular coat of hollow organs, or on the capsule of solid organs.

The same reasoning would suggest that gastric or duodenal ulcer symptoms are not due to direct mechanical or chemical irritation of the ulcer, but to intrinsic neuromuscular changes in gastric and duodenal irritability, rhythmicity, contractility and tone due to the influence of the ulcer on local metabolism, or reflex through extrinsic vagus and splanchnic nerve control.

In disease, and especially visceral disease, the cerebro-spinal nerve centers may become hyperirritable from constant amplified stimuli, so that their threshold of response is lowered, and impulses which are normally unnoticed may penetrate the nerve synapses and reach consciousness and be expressed as altered sensation (fullness, distension, hyperesthesia or pain) in visceral or somatic structures, and more especially does this occur in the epigastrium.

Nerve exhaustion from overwork or from too constant application as in the overzealous business or professional man, or the physically exhausted nervous woman, or from worry over business, health or domestic affairs, produce altered nerve response with symptoms frequently referred to the epigastrium.

Gastric sensibility and pain are largely influenced by nerve and psychic stability and irritability. The unstable, fatigued and irritable nerve centers of the neurasthenic are conducive to variable and magnified gastric sensibility. The perversions of interpretation of sensory stimuli as occur in the hypochondriac lead to various subjective symptoms of epigastric distress or pain. Apprehension, suggestibility and fear markedly influence gastric sensibility. Emotional and hysterical individuals often suffer with subjective gastric distress.

As functional disturbance of the nerve and psychic centers result in altered nerve response

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to stimuli in such a manner as to modify or produce gastric symptoms, to a greater degree does organic disease of the nerve centers modify nerve and psychic response to stimuli. Thus it is that the pain of a locomotor ataxia is referred to the epigastrium.

Again the antagonistic action in the viscera of the two divisions of the vegetative nervous system, the one activating and the other inhibiting action, maintains visceral equilibrium. When this equilibrium is disturbed by over-irritation of either system, a disturbance in function ensues and symptoms result manifested in disturbances of gastro-intestinal motility, secretion and sensation.

Acute pain, toxemias, acute infections or strong emotions stimulate the sympathetic nerves and inhibit gastro-intestinal tonus and spasm (sympathicotonia) while continued irritation, chronic inflammation (with but little toxemia), neuroses and anaphylactic states, stimulate the parasympathetic system and activate gastro-intestinal tonus and spasm often adequate for distress or pain (vagotonia). We also must remember that the sensibility of the two systems, while essentially unlike in different individuals, also is variable in the same individual.

Another confusing element is the epigastric or gastric distress and pain from disease or dysfunction in other viscera or other structures. This is well exemplified in acute appendicitis, where the earliest pain is visceral and is located in the midline in the region of the umbilicus (referred pain).

It is possible that the visceral stimuli may be sufficiently strong and persistent, or the threshold of nerve response amply lowered to induce viscerosensory, visceromotor or viscerosecretory reflexes adequate for true or reflex gastric distress or pain, which may accompany the "localized" pain, although their differentiation may be exceedingly difficult or impossible. Or the irritation from the diseased appendix may induce intrinsic neuromuscular irritability, contractility and tone in the stomach adequate for gastric distress or pain.

Simultaneous with this pain, or subsequent, is the pain, hyperesthesia and hyperalgesia in somatic structures supplied by spinal sensory nerves, which arise from the same spinal segment or segments to which the afferent sympathetic fibers which supply the appendix pass. The breadth of this reflex depends upon the strength of the afferent sympathetic stimuli and nerve cell resistance in the cord. The afferent impulse may be transferred to more widely spread efferent neurons, making the area of reflex response greater.

In a similar manner do diseases or disturbances of other viscera produce these types of localized, true or reflex visceral pain. Angina pectoris is frequently diagnosed as "acute indigestion", chronic appendicitis or cholecystitis as "stomach trouble"; bowel distress or pain is frequently localized in the epigastrium; in pulmonary tuberculosis the symptoms are often gastric; pelvic or renal diseases often produce stormy gastric symptoms of nausea, vomiting and gastric distress or pain, while the symptoms of functional or organic nervous and psychic disturbances are frequently manifested in the stomach.

The effect of exposure in the production of colds is a common observation, the afferent impulses pass over the spinal sensory nerves, the efferent over the sympathetic nerves which influence vascular and visceral tone. Disease in somatic structures may similarly influence vascular and visceral tone. Exposure may produce a pleurisy, bronchitis or pneumonia, equally so may it disturb gastric or intestinal function. The vascular and visceral insult and decreased tissue resistance even producing acute inflammation with dull ache or acute pain and if persistent chronic inflammatory changes with corresponding modified function.

In like manner we may have gastric symptoms as a result of intoxications, or diseases of metabolism, of the blood and ductless glands. The epigastric pain of chronic lead poisoning or of the morphine habitue, the distress or pain in the epigastrium in anemia, chlorosis, diabetes and obesity are examples. The opposing action of pituitrin and adrenalin on unstriped muscle, the influence of over and under activity of the gonads, thyroid and parathyroids must always be considered. Not a few cases are operated for appendicitis, tubal, ovarian or gall-bladder disease, or treated medically for colitis, spastic bowel, gastritis or gastric or duodenal ulcer, when the real trouble may be an overactive pituitary or thyroid or under active adrenals, gonads or parathyroids.

It may thus appear evident that gastric symptoms simulating ulcer may be due to so many factors outside the stomach, its walls and orifices, that we are not justified in diagnosing organic disease in the stomach or duodenum from gastric symptomatology. However, there are certain differential facts or tests which may aid us in determining the nature and source of gastric symptoms.

The history and clinical symptoms of gastric and duodenal ulcer are so distinctive, as Moynihan has pointed out, that the diagnosis might be made by correspondence. This may be true of typical ulcers, but unfortunately most ulcers are atypical in their symptomatology, and this is even more true in gastric ulcers, besides the greater percent of all gastric symptoms are functional and simulate those of organic gastric

or duodenal disease, so that the differential diagnosis requires the closest study, observation and analysis.

The ordinary typical ulcer history as understood is only a hyperacidity history and any condition giving rise to hyperacidity may simulate ulcer. On the other hand, ulcer may exist without hyperacidity, with normal or subnormal acid values, and thus without presenting the familiar typical history we have learned to expect. The vomiting of blood is not a common incidence in ulcer, and even the presence of blood in the vomitus, aspirations or stools is not conclusive of organic gastric disease unless extraneous sources are excluded, besides hematemesis may occur in association with hyperchlorhydria from any cause, when no ulcer or other organic disease exists. The ready relief of gastric pain by food, alkalies, aspirations and lavage if methodical and complete is good evidence of ulcer, and yet I have many times seen bowel or hunger distress relieved by the same means. The evidence of seasonal remissions, recurrences and chronicity seem conclusive, and yet in my experience some of the most typical chronicity ulcer histories have been cases of chronic pulmonary tuberculosis in which the added vasomotor insult due to weather changes during the spring and fall months reduced tissue resistance and induced sufficient acute pulmonary inflammation for reflex recurrence of gastric symptoms.

The entire absence of any gastric abnormality except subjective tenderness in the epigastrium or in one or the other hypochondrium on physical examination has long been assumed to be characteristic of ulcer, especially when history has created the impression that ulcer exists. A palpable tumor in the epigastrium is rarely due to cicatricial tissue of a chronic ulcer. When found it is usually a neoplasm. The discovery of peristaltic waves across the stomach means mechanical obstruction, with hypertrophy and tone of the gastric walls; but it does not by itself indicate ulcer any more than it does cancer, or adhesions, or possibly lesions in other viscera or structures. The value of the physical examination is the negative or positive findings in other viscera and structures, for we now know that various extragastric conditions may present a symptomatology similar to gastric or duodenal ulcer.

Too much reliance in the past has been placed on the analysis of gastric contents. The characteristic finding was hyperacidity; and when this was proved to exist, "after a typical ulcer history had been elicited and a tender spot in the epigastrium had been found, the last bit of evidence was supposed to have been adduced to justify a diagnosis of ulcer." It is true that hyperacidity accompanies ulcer, on the contrary ulcer is almost as frequently found with acidity within normal limits or even below normal, while hyperacidity may be associated with numerous other conditions besides ulcer. Hence the old diagnostic combination of characteristic history, negative gastric physical findings, and hyperacid stomach contents may mean ulcer or various other conditions.

A common symptom in gastric or duodenal ulcer is hypermotility. The explanation probably lies in disturbance of local metabolism from mechanical or chemical irritation of the ulcer, resulting in intrinsic neuromuscular changes in gastric and duodenal irritability, rhymicity, contractility and tone; or to reflex influences on gastric and duodenal motility and tone through extrinsic vagus and splanchnic nerve control, the fibers of which are plentifully supplied to the upper gastro-intestinal tract from cardia to jejunum. This increased gastric motility and tone is usually accompanied by inhibition of pyloric relaxation, due to increased gastric acidity, amounting often to pyloric spasm, and delay in gastric emptying often sufficient to suggest mechanical obstruction, or the mechanical obstruction may be due to induration or cicatricial scar from chronic recurrent ulcer. But here we must also remember that similar disturbances in gastric motility and emptying may be due to cancer, or to lesions in other portions of the gastro-intestinal tract or in other viscera, which produce increased gastric acidity, or inhibition of pyloric relaxation and gastric motor irritability.

The fluroscope is of inestimable value in the study of gastric motility and gastric emptying. The fluorescent screen enables us to study gastric waves, their number, rhythmicity, depth and the manner in which they fade away at the contraction ring; also the duodenal cap, and the rapidity of gastric and duodenal emptying. In case fluoroscopic examination suggests crater or puckering deformity or motor interference, roentgenograms are indicated for detail and graphic record. It should be remembered, however, that anatomical defects may not show in the roentgenograms if they be on the posterior aspect of the stomach or duodenum as frequently occur, or on the anterior surface as occasionally happens, or unless the defect is placed in proper perspective, or the stomach properly distended by the barium meal.

We have learned, if no evidence of ulcer appears from the fluoroscopic or roentgenographic examination, to distrust all other evidence, no matter how convincing it may appear. On the other hand disturbed motility or retarded gastric or duodenal emptying, or apparent defects in the outlines of the pylorus, duodenal cap, antrum, fundus, or greater or lesser curvatures, suggesting the presence of ulcer, should

not be interpreted as positive proof unless other evidence coexists in history, physical examination, laboratory findings and clinical test outs. This whole question of the results obtained by gastro-intestinal roentgenographic examinations is a very serious one, for no man can devote his time both to clinical investigation and to roentgenographic technic without doing injustice to one or the other, and roentgenographic evidence is misleading and worthless unless taken in connection with the history and physical examination, laboratory and clinical findings.

The majority of stomach ulcers that are located on the lesser curvature or posterior wall, and distant from the pylorus, usually give rise to few symptoms and heal without treatment.

No doubt pyloric and duodenal ulcer symptoms disappear under various treatments, medical or surgical, or without any treatment. Many cases presenting symptoms of gastric or duodenal ulcer are not ulcer, but temporarily respond to any treatment which offers rest, restricted diet and better drainage, symptoms recurring again under like conditions. Likewise all ulcer cures, medical or surgical, are not cures, only symptoms are relieved, the ulcer does not heal.

The fundamental questions in the treatment of ulcer as stated by Sippy are: (1) What retards or prevents ulcer healing; (2) What can we do to promote best the development of granulation tissue essential to the healing and final cicatrization of ulcer; (3) What procedure is best to prevent and relieve complications?

It has been proven that a small amount of free hydrochloric acid in the stomach is just as potent in activating the pepsin as a high degree of acidity, also that while acid gastric juice may not be the cause of peptic ulcer, yet it is usually present in varying amounts in active ulcer, and inhibits or prevents ulcer healing either by its corrosive action, or by its influence on gastric hypertonus, peristalsis and pyloric inhibition, preventing gastric and duodenal rest so necessary to ulcer healing.

It would therefore appear that proficient treatment of gastric or duodenal ulcer would require complete neutralization of free gastric acidity. This is best accomplished by food, alkalies and gastric aspirations. Temporary starvation and rectal feeding are unnecessary because three or five days' abstinence of food in the stomach is of little value in quieting spasm, peristalsis and tone, and the presence of non-neutralized acid in the fasting stomach may produce corrosive action, besides rhythmic systoles due to hunger interfere with physiologic gastric rest and irritate the ulcer.

The alkalies ordinarily used are sodium bicarbonate, calcium carbonate and heavy magnesium oxide, the magnesia being desirable to the point of bowel tolerance because of its high and continuing neutralizing power and its laxative properties, the sodium bicarbonate and calcium carbonate to complete the neutralization.

The alkalies are given frequently because of their fleeting action, with sufficient aspirations to make sure free acidity is controlled, therapeutic aspirations in case of pain with lavage if necessary, and routine aspirations to check control. It is desirable to use sufficient alkalies to neutralize the free acidity and not alkalinize the gastric contents. Combined acids do not interfere with ulcer healing, besides the normal habitat of gastric epithelium is an acid or at best a neutral medium. However, I have failed to see any pernicious effects from over alkalinization, more often are failures in treatment attributable to underneutralization. Indeed the best medical treatment for ulcer hemorrhage is overalkalinization and physiological gastric rest. Little if any stimulation of acid cells results from alkalies, and mucoid secretion is reduced by removing the acid irritation of the ulcer. Besides complete neutralization lessens the tone and motility of the stomach, removes pyloric inhibition, and enables the stomach to empty more readily, more easily and completely and with less irritation to the gastric or duodenal ulcer.

No doubt there is an added increment of motility from gastric aspiration or lavage, however the slight disturbance of relative gastric physiological rest is minor compared to the failure of underneutralization with its consequent increased gastric tone and motility and local irritative and corrosive action.

Food combines free acid forming acid albumins and peptones which interfere but little with ulcer healing. Combined acids are readily neutralized by the alkaline juices of the duodenum which removes pyloric inhibition and enables the stomach and duodenum to empty more rapidly with the least effort and irritation and with consequent less acid secretion and more relative physiological rest.

Liquid carbohydrate mixtures (barley water, rice gruel, cream-of-wheat gruel, etc.) probably require the least gastric and duodenal digestion, excite the least acid secretion and pass relatively rapidly through the stomach and duodenum; but they have no acid combining power, have but little food value, are not balanced in proteins, carbohydrates and fats to properly and sufficiently nourish ulcer patients who usually are anemic and poorly nourished.

In the early treatment equal parts of milk and cream give us the most ideal food from every standpoint, the protein clot being of minor significance. The milk and cream should be given frequently and in small quantities in order that they may least disturb physiological rest, excite

least acid secretion, best neutralize free acidity, and furnish adequate heat calories for the resting individual, being alternated with alkalies adequate to complete neutralization of any free acid. Later in the treatment other foods are added, bearing in mind the principles stated.

"The old and generally accepted belief that gastric juice corrosion is the most important influence that retards the healing of ulcer receives confirmation from the results that are obtained by all methods of treatment that have contributed to the healing of ulcer. In the light of all present knowledge, the development of granulation tissue leading to the healing and final cicatrization of ulcer is promoted by a given type of medical or surgical treatment directly proportionate to the influence exerted by that treatment on the duration and intensity of gastric juice corrosion."

When to the clinical picture of chronic ulcer is added the evidence of pyloric obstruction, furnished by repeated vomiting of retained food, the presence of food in the fasting stomach, the presence of sarcinæ and continuous secretion, the occurrence of peristaltic waves and the demonstration of barium residue, the essential problem of treatment becomes how to relieve the mechanical interference and how to prevent complications, and give the patient the best opportunity for health and life and after usefulness.

To conscientiously solve this problem requires the answer to several questions; viz., (1) What is the danger of cancer on ulcer? (2) Can we hope in these types of cases for relief and cure from medical and dietetic treatment? (3) What does surgery offer? (4) What is the percent of mortality from medical and surgical treatment?

1. Because as has been stated by Smithies and the Mayos that 60 percent of gastric cancers, demonstrated surgically and pathologically, have antecedent histories, which clinically cannot be differentiated from chronic gastric ulcer, is no indication, even if it be true, of antecedent ulcer, as ulcer histories are evident in so many other conditions, as demonstrated by Cheny, Einhorn, Boas, Rosenhein, Sippy and many others. Einhorn says: "If I should select only cases in which I could make a diagnosis of cancer based on ulcer, I would have a proportion of one in twenty or less." In addition postmortem pathologists have often confused these cases with those in which cancer becomes necrosed and forms an ulcer on its base, which is of frequent occurrence. If the cancer is found at the base of a so-called ulcer it is good evidence that it was cancer from the beginning; if found on the margin of an indurated ulcer the base and cicatricial tissue free from cancer evidence is cancer developed from ulcer. There is practically always more or less ulceration in cases of cancer, but that is an entirely different proposition from the development of cancer from ulcer.

Cancer histories ordinarily appear suddenly in an individual previously healthy, with few antecedent gastric symptoms. It is true we may have cancer with antecedent ulcer history, but ulcer symptoms do not always mean ulcer, and ulcer symptomatology is atypical and especially gastric ulcers. Even with these chances of error, ulcer history preceding gastric cancer is not the rule. It will not do to say that if careful histories were taken ulcer evidence would be found. This may be true in some instances, but the evidence of the best clinicians bears out the above statements.

Friedenwald in his clinical history of 1,000 cases of cancer of the stomach found only 23 percent that gave a history of any previous digestive troubles, and only 7.3 percent in which previous history could be interpreted to mean chronic gastric ulcer. Lockwood says that among 174 cases of gastric cancer he found only 7 percent that gave a history pointing to previous ulcer. Boas says such metamorphoses (ulcer to cancer) is not to be numbered among frequent occurrences.

No doubt cancer develops on ulcer, but the reports of the Mayos of such metamorphoses is far too high if we are to believe the experience of a large number of clinicians, pathologists and surgeons, and to operate all gastric ulcers on the ground that they are potential cancers would be applying to all cases a method of treatment applicable to the minority of cases, and the mortality from operation would be greater than the mortality of subsequent cancer, for these operations are not all performed by the Mayos or by those surgeons equally skilled.

2. Can we hope in these types of cases for relief and cure from medical and dietetic treatment?

That chronic gastric ulcers heal by granulation and fibrosis under proper conditions the same as chronic ulcers in other portions of the body cannot be denied. Will Mayo says: "While no one would contend that every gastric ulcer should be surgically treated, we at least should agree that if permanent cure does not take place within a reasonable period, other things being equal, the patient should have surgical treatment."

Experience has demonstrated that pyloric spasm and inflammatory exudation in pyloric and duodenal ulcer, producing mechanical obstruction, disappear under careful and energetic medical and dietetic treatment and rest. Round cells and other exudative products are removed, the infiltrated tissue grows thinner in all directions, the edema disappears and the pyloric

opening becomes more patent, when healing of the ulcer takes place, notwithstanding the tendency of fibrous tissue to contract.

No one claims that fibrous tissue once formed is ever removed but if the stomach after treatment is able to empty on time a motor meal without distress and with moderate motility, regardless of the tumefaction or deformity resulting from the fibrous healing of chronic ulcer, medical treatment has accomplished as much as most surgical measures usually offer, viz., mechanical relief.

If after reasonable time the mechanical obstruction is not amenable to careful and energetic medical and dietetic treatment and rest, or if relapses occur, or if the individual is approaching the cancer age and having continuous rather than intermittent type of gastric disturbance, exploratory and if necessary radical operation is indicated.

3. What can surgery offer?

I shall leave this question to the men qualified to answer. However, it seems to me that the only operation that offers cure of gastric and duodenal ulcer is excision or cauterization of the ulcer combined with posterior gastro-enterostomy.

After gastro-enterostomy alone food and secretions continue to pass through the pylorus proportionately to the size of the opening that exists through the strictured area of the pylorus and duodenum, and the reason the ulcer heals in the course of time after gastro-enterostomy is the same as the reason that a majority of the non-obstructive types of ulcers heal by various methods of treatment or by no treatment, viz., better drainage and less duration and intensity of gastric juice corrosion.

No one questions the indication for surgery in the complications of ulcer not amenable to medical and dietetic treatment. In my judgment surgery is a necessary part in the treatment of selective cases of gastric and duodenal ulcers, and the medical man must assume the responsibility, and it is just as much his duty to provide a competent surgeon as to provide a competent medical treatment.

4. What is the percent of mortality from medical and surgical treatment?

The operative mortality record from the Mayos of gastric ulcers is 4.5 percent, and of duodenal ulcers 2 percent. The mortuary record for the first six years following operations for gastric ulcer compared to the same number of persons from the general population with like distribution as to age and sex, is four times as great for the first year, three times as great for the second year, two and one-half times as great for the third year, twice as great for the fourth and fifth years, and equal for the sixth year. An average of 2¾ percent greater for the six years. No such difference was observed after operation for duodenal ulcer. No statistics are available in non-operated cases of gastric and duodenal ulcer, and accurate statistics in this group will probably never be entirely possible, because the uncertainties in diagnosis discount more or less the dependability of such figures.

The diagnosis and treatment of gastric and duodenal ulcer are among the most difficult things in medicine and surgery. The medical man, the surgeon, the laboratory man, the roentgenologist and the pathologist should work together. It is unjust to unnecessarily subject the patient to surgery or a long course of medical treatment when careful diagnosis would prevent. On the other hand it is just as wrong to deprive the patient of necessary surgical or medical care. A few questions and a prescription or exploratory incision lead to medical and surgical disrepute. Too often do we have patients following abdominal or pelvic operations with symptoms the same or exaggerated, or patients treated medically when the condition is obviously surgical. We probably differ as to what constitutes a medical or surgical condition, but it should be a difference of careful analysis and open mind and not one of arrogant opinion. With the most careful and conscientious work and the closest cooperation mistakes are made which after thought shows to be indefensible.

ULCER OF THE STOMACH AND DUODENUM

SURGICAL TREATMENT*

JOSEPH RILUS EASTMAN, M.D.
INDIANAPOLIS, INDIANA

A majority of cases of gastric ulcer which refuse to yield to medical treatment are curable by surgery. The oldest and perhaps most important indication for surgery is represented by cicatricial narrowing of the pylorus due to healed or healing ulcer. Here the correct treatment is not far to seek. It consists in the establishment of a new avenue of communication between the stomach and small intestine by means of gastroenterostomy and less frequently by operative widening of the narrowed pylorus—the pyloroplasty.

In early ulcer at or near the pylorus gastroenterostomy by diverting the stream of stomach contents protects the ulcerated area and favors cure. Patterson of London has contended that the mechanical or anatomic conception of gastroenterostomy is erroneous. He does not look upon it as a drainage or food short circuiting procedure, attaching little importance to this

*One of the papers of a symposium presented before the Indiana State Medical Association, Indianapolis Session, September, 1921.

phase, but regards it as a physiologic or chemical operation and maintains that the cure of gastric ulcer after gastroenterostomy is brought about by the entrance of alkaline duodenal juices into the stomach through the new stoma, the hyperacidity of the stomach contents being thus overcome and healing effected.

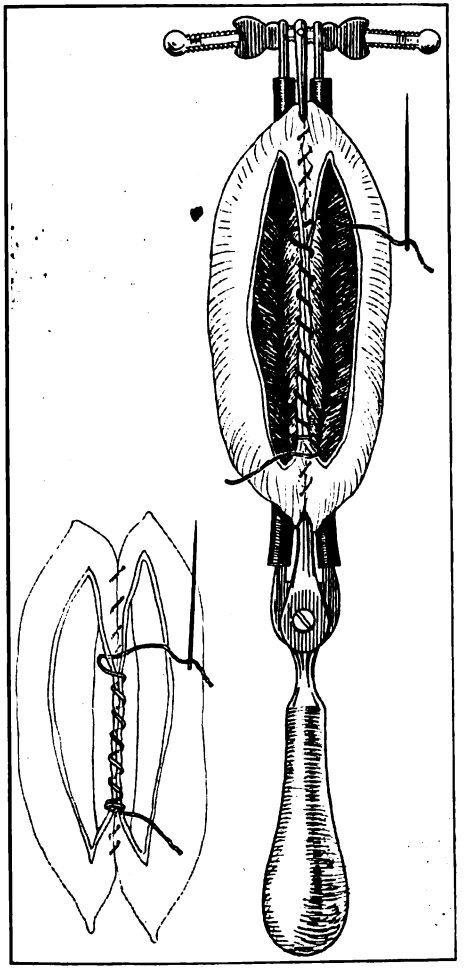


Fig. 1—First or lower half of hemostatic suture introduced as simple over-and-over stitch—may permit bleeding.

Cure of gastric ulcer following anterior gastroenterostomy which affects drainage only, imperfectly, and other data support the claims of Patterson. On the other hand, it is difficult to explain the cure of gastric ulcer after pyloric exclusion, for example by Von Eiselsberg's plan (in which the stomach is divided toward the cardia, the ends closed and gastroenterostomy done on the cardial stomach sack) by assuming a change in stomach chemistry, since here the new stoma establishes no new communication between the duodenum and pars pylorica.

It has been maintained by the friends of Patterson's view that cure of ulcer of the cardiac end by gastroenterostomy cannot be due to relief of irritation of the ulcer area through short circuiting, hence they turn to the changed chemistry or alkalinization by duodenal contents for explanation. However, it seems just as reasonable to regard gastroenterostomy in ulcer of the cardiac end as a step which cures by overcoming stagnation of stomach contents, reducing hyperacidity by more rapid emptying of the stomach and this need not imply disrespect for the view that entrance of bile and pancreatic

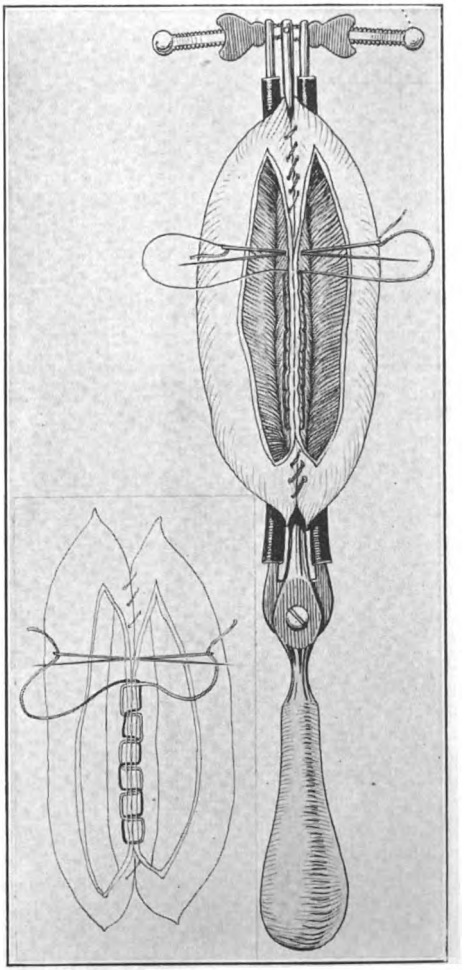


Fig. 2—Hemostatic suture uniting mucous membrane introduced as Cobbler's or Harness Maker's—waxed end is employed.

juice through the new stoma is an important factor in cure of ulcus ventriculi by gastroenterostomy. But regardless of the view which one may favor as to the way in which gastroenterostomy cures gastric ulcer, the fact remains unshaken—gastroenterostomy does cure benign ulcer and with gratifying regularity.

The operative mortality of gastroenterostomy depends upon many factors, but should be comparatively slight. It is certainly small in all those patients which have not been weakened by inanition and repeated hemorrhages. In cicatricial stenosis of the pylorus the good results of gastroenterostomy are prompt to appear and lasting. The motor and secretory activity of the stomach returns to normal, or approaches it. In ulcer of the pylorus gastroenterostomy added to pyloric exclusion as with the Wilm's facia ring nearly always brings cure.

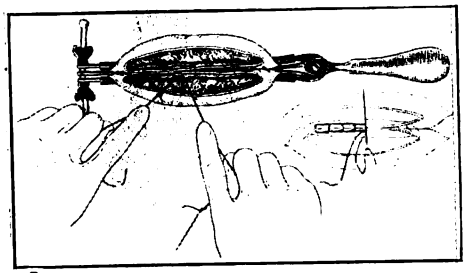


Fig. 3—Running knotted loop suture to control bleeding of mucous membrane. Introduced almost as readily as a simple continuous over-and-over stitch, but is in effect a series of interlocking interrupted sutures.

The ulcers of the body of the stomach, especially those of the lesser curvature, are not always relieved by gastroenterostomy. Bamberger found that eighty percent of all gastric ulcers are cured by gastroenterostomy. Sixty percent of ulcers of the body of the stomach are thus relieved. It should be remembered that it is the ulcer distant from the pylorus which is most likely to be associated with inflammatory tumors of the stomach wall, the callous penetrating form not infrequently involving the pancreas, liver and spleen. These are the cases requiring cauterization or resection in addition to posterior gastroenterostomy. (Rodman operation or the Bilroth number one or number two.) The importance of resection of the ulcer bearing area in such cases is only too often emphasized by the post-operative finding of carcinoma in clinically benign callous ulcer.

Crile (*Ohio State Medical Journal*, Sept. 1, 1921) is convinced that no absolute differential diagnosis between cancer and ulcer is possible before operation; nor at the operation except by the pathologist; nor by the pathologist in certain borderline cases. Irrespective of operative treatment, the dietetic management of all ulcer cases is an essential before and after surgical intervention. In patients, exhausted by long standing ulcer or cancer, conservation and restoration of bodily economy must be secured by restoration and preservation of the acid-alkali balance of the cells, particularly of the brain and liver; maintenance of an adequate circulation; as well as a minimizing and, where indicated, a dividing of the trauma of operation.

There is, of course, no debate as to the value of surgery in perforation of stomach ulcer. This happens most frequently in ulcers near the pylorus and here, owing to the mobility of this portion, the chances of adhesion formation with walling off are slight. Pain, nausea, collapse, the boardy, hard, concave, canoe abdomen mean immediate operation, closure of the perforation with or without gastroenterostomy, according to the condition of the patient. A patch of omentum over the sutures closing the perforation is often of value, and careful mopping out of the escaped contents without irrigation is imperative. We are advised by some surgeons to close the abdominal wound after such an operation without drainage. I cannot bring myself to this view.

In perforating duodenal ulcer, the chances of cure by operation are not so good as in gastric ulcer, but in either case the result is nearly always determined by the ability of the attending physician to diagnosticate the condition promptly. In the first twenty-four hours the chances of success sink from eighty to thirty percent. In duodenal ulcer, before perforation most surgeons incline to posterior gastroenterostomy with pyloroplication, pylorus closure by facia, or pyloric exclusion.

The most rational method of gastroenterostomy is the so-called short loop posterior type, the gastroenterostomia retrocolica of von Hacker, with the added precaution of Peterson and Mayo, in which the stoma is made in the very uppermost part of the jejunum, which lies against the posterior stomach wall, separated only by the weblike transverse mesocolon. If this precaution is observed, vicious circle is practically eliminated. The opening in the intestine should be at the flexura duodenojejunalis, or at a more deeply situated point. The transverse colon is delivered through the wound, the mesocolon spread out, and a nonvascular area found. The clamp is laid on the gut and stomach and the seroserous anular proximating suture of No. chromic catgut is passed close to the clamp

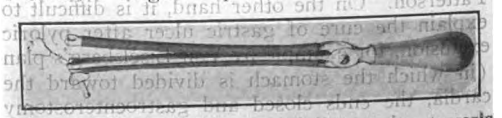


Fig. 4—An efficient and [illegible] clamp of uncomplicated construc[illegible]

jaws in a line a few millimeters below the lines of incision into the gut and stomach. Obviously, the seroserous suture must extend beyond the lines of incision in the gut and stomach at both ends. Before continuing the serous suture around and above the incisions, the margins of the openings in the gut and stomach are united

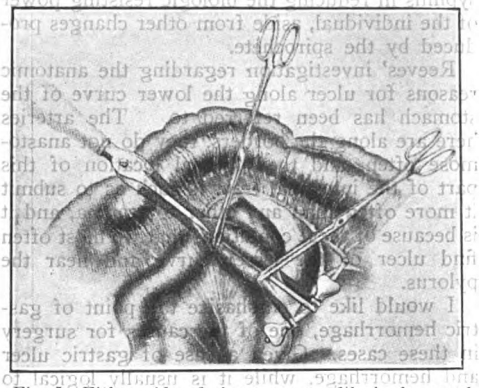


Fig. 5—Either side of clamp can readily be loosened for readjusting stomach or intestine by unscrewing the wing-nut.

by the hemostatic suture of catgut. This suture may be introduced for the first half of its length in the simple over and over fashion, or as a cobbler's or a harness maker's stitch with a needle at each end, this insuring better hemostasis in a position which after completion of the operation would be difficult of access. For this hemostatic suture the writer uses the running knotted loop suture shown in illustration number three. This knotted suture prevents bleeding of the mucous membrane in a most satisfactory degree. It is introduced as readily as a simple running or continuous suture and has the effect of a row of interlocking interrupted sutures. If a hemostatic suture is begun as a simple over and over stitch, it is continued over the stoma as a running Cushing suture, applied by the outside-inside, inside-outside rule. Either the cobbler stitch or the knotted loop suture can be carried completely around the stoma, inverting and securing the margins as well or even better than the running Cushing suture. After the hemostatic suture is in place all around, the serosa suture is picked up and applied in the last half of its course. In posterior gastroenterostomy additional guy sutures are not often necessary. A step of great importance is the securing of the margin of the openings in the transverse mesocolon to the stomach by interrupted sutures to prevent prolapse and hernia of the stomach through this layer.

The gastroenterostomy clamp shown in the illustrations has, it is believed, advantages of construction and application sufficient to justify its recommendation to anyone doing operations on the stomach and intestines.

In applying this clamp there need be no confusion as to which is the top or bottom of the instrument, nor as to which is the right or left side. Pressure can be gauged accurately by turning the wing-nut which rests with a ball-seat in a concavity on the outer side of the end of each of the lateral bars. The wing-nut moves upon a short, thin, threaded lever which is attached by a hinge joint to the end of the median bar. The lever swings radially into a slot at the distal end of the lateral bars or jaws of the clamp. It is quite easy to release pressure on either side without loosening the other side so that, for example, the intestine or stomach may be drawn up farther into the grasp of the clamp, if desired, on either side, without releasing the opposite side. This can be done with other intestinal anastomosis clamps; but as in the case of scissors-handled forceps, this step may require a little time and art.

After the introduction of the inner hemostatic suture both sides may be released, so that the seroserous approximation secured by the outer suture may be accomplished without traction and consequent tearing out of the suture and without danger of the operative field slipping into the abdomen and out of convenient reach. The lever and wing-nut device at the distal end of the clamp has been used in other clamps and its value is well known to those who are familiar with the embarrassments incident to imperfect

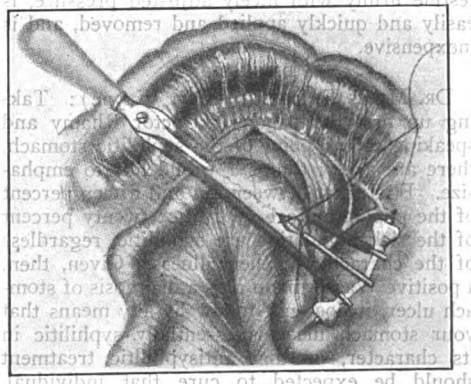


Fig. 6—Both sides of the clamp can be loosened to permit completion, the operative field still being held up in favorable position.

closure at the distal end of the anastomosis forceps. After the completion of the anastomosis, the threaded levers are placed in alignment with the median bar before withdrawal of the instrument. The slanting margins of the heart-shaped wing-nuts, and their small size, prevent catching of the instrument as it is withdrawn.

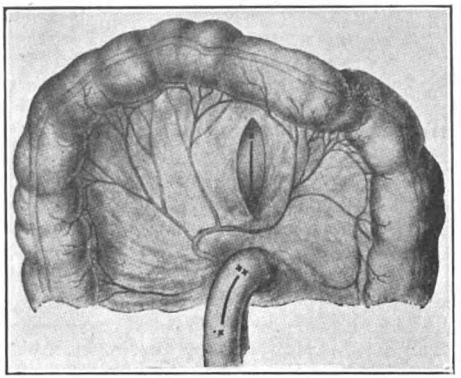


Fig. 7—Position of incisions in jejunum and stomach in posterior no loop gastro-enterostomy. Intestinal incision at duodeno-jejunal flexure.

The median bar of the clamp is not so thick as it is in other clamps, thus minimizing the possibility of tension upon any other sutures. The large proximal hinged joint of the instrument has been made very heavy and strong intentionally with a view to securing durability and firmness.

In order to secure an elastic spring pressure along the full length of the clamp, the bars deviate gradually from the median bar in the distal half and are so tempered that the screwing down of the wing-nuts accomplishes firm pressure without crushing.

This instrument is light in weight, simple and convenient to use, holds the stomach or intestine firmly with nicely adjusted pressure, is easily and quickly applied and removed, and is inexpensive.

DISCUSSION

DR. MILES F. PORTER (Fort Wayne): Taking up first the paper of Doctor Rhamy and speaking to the point of the syphilitic stomach, there are a few things I would like to emphasize. First, that between ten and fifteen percent of the population are syphilitic; twenty percent of the sick population are syphilitic, regardless of the character of their illness. Given, then, a positive Wassermann plus a diagnosis of stomach ulcer, it does not follow by any means that your stomach ulcer is essentially syphilitic in its character, or that antisyphilitic treatment should be expected to cure that individual. Given a case of stomach ulcer in a syphilitic it may be that that ulcer is in a measure the direct result of the syphilitic infection, and, on the other hand, it may be that the syphilitic infection is an etiologic factor, but only in an indirect way. That is to say, that the ulcer in this particular case is not due to involvement of the connective tissue by virtue of the stimulation from the spirochete, but due to the general fact that syphilis reduces the resistance of the individual. Some of you will recall that a large percentage of all of our cases of meningitis and hip joint disease does occur in syphilitic trouble. In Melbourne, Australia, out of the ten percent of the child population which is syphilitic the Children's Hospital gets over fifty percent of its sick babies. This is the effect of syphilis in reducing the biologic resisting power of the individual, aside from other changes produced by the spirochete.

Reeves' investigation regarding the anatomic reasons for ulcer along the lower curve of the stomach has been referred to. The arteries here are along the borders, they do not anastomose often, and the physical location of this part of the intestinal tract is such as to submit it more often than any other to trauma, and it is because of these conditions that we most often find ulcer of the lesser curve and near the pylorus.

I would like to emphasize the point of gastric hemorrhage, one of the causes for surgery in these cases. Given a case of gastric ulcer and hemorrhage, while it is usually logical to assume that the hemorrhage is from the ulcer, yet that is not always true. I have had the misfortune, or the fortune if you please, to operate for duodenal ulcer and have my patient continue to bleed; then to refer him to another clinic and have the pyloric section of the stomach removed. He had a duodenal ulcer and hemorrhage from the ulcer; but he also had hemorrhage from arterial degeneration consequent upon myocardial renal disease and high pressure, and the bleeding happened to come from the stomach.

I have for some years used, with great satisfaction, the clamp shown by Doctor Eastman.

I want to call attention to a possible misapprehension that may come from quotation of the statistics from the Mayo Clinic as to deaths following treatment. I want to say that all of the deaths in the Mayo Clinic are regarded as deaths from operation, provided the individual dies in the hospital while there, perhaps in ten days or two weeks' time.

I would also like to say in regard to the number of cases cured medically or surgically, that the ulcer of the stomach that comes to the surgeon has been cured by the internal man on an average of six times before it is finally and permanently cured by the surgeon.

DR. A. B. GRAHAM (Indianapolis): That we are not of one and the same opinion, and that as yet we have failed, as McCaskey says, to evolve a "harmony" out of the conflicting current views on so-called peptic ulcer, is substantiated clearly when we review carefully the abstracts of the papers comprising the exceedingly interesting symposium which has been presented for our consideration this morning.

As to the etiology and pathology of gastric and duodenal ulcer, Doctor Rhamy has covered this field in a most thorough manner. Until more accurate data or proof is furnished we shall continue to agree with him in the opinion that as to the etiology of ulcer the essential factor is a localized loss of vitality permitting auto-digestion.

Many gastric and duodenal ulcers are easy of diagnosis; some demand all the methods of examination at our command for the making of diagnosis; and in a small percentage of cases we fail to make a correct diagnosis. I agree with Dr. Foreman that gastric secretion is influenced by many factors outside of the stomach, and should receive due consideration in every case; but my personal experience will not enable me to corroborate his statement that the amount and character of the gastric secretion gives little knowledge of the pathology of the stomach. I appreciate fully that in this opinion he has the support of some well-known physicians, and yet, after twenty-five years' experience in gastro-enterologic work, both medical and surgical, it is my opinion that gastric secretions give important data which is valuable in the making of a diagnosis of gastric and duodenal ulcer. Gastric analysis alone will not make the diagnosis of ulcer, but I do maintain that in my experience it has proven of sufficient importance to maintain a prominent position with the other methods of examination employed daily in our work. Without a gastric anaylsis it is impossible to say with any degree of certainty what is the secretory or motor activity of a given stomach, but the routine examination of the gastric contents, properly interpreted, gives us a fairly accurate determination of the secretory and motor activity, it enables us to study and interpret the chyme, the presence or absence of mucous or any abnormal material, and, finally, we can determine the presence or absence of macroscopic or occult blood—all of which assists in the correct diagnosis of ulcer. In former years, when we employed the Ewald tube and expressed the stomach contents one hour after the ingestion of the test breakfast, our studies of these contents did not give us as valuable data as we are obtaining at the present time. It was with this method (the horror of the large tube) that factors outside of the stomach, mostly psychic, influenced the secretory activity to such an extent as to spell failure in a small percentage of our cases and prove of little value as a diagnostic method. During the past three years we have been making fractional studies of the gastric contents, employing for this work the gastro-duodenal tube. In a certain percentage of cases the psychic element is also present, but since we keep the tube *in situ* from an hour to an hour and a half, the patient loses her fear of the tube and we secure very definite data as to the secretory activity, where a correct technique is followed. With this method our percentage of correct diagnoses has shown a decided upward trend, as has been corroborated by both the roentgenologists and surgeons who have been associated with us in this work.

My statistics do not conform with those of Moynihan and others—that 20 percent of ulcer cases show a hyperacidity, and that the other 80 percent are equally divided between normal and diminished secretory activity. With the fractional method of study, 80 percent of our patients have shown a secretory activity in excess of the highest point of normal.

I am unable to support the statement that gastric symptoms are motor rather than secretory. My records show that in those cases in which the secretory activity has been highest, the misery and pain has been the more intense, and the spasticity as revealed by the fluoroscope the more pronounced. Motor activity, tension and spasticity do play a role in the production of this misery or pain, but when one repeatedly relieves this symptom by the administration of alkaline medication, it is difficult to eliminate the direct contact of HCl with the ulcer as the real primary factor of the pain and spasticity in many cases. The same is true of antispasmodics, such as belladonna and atropin.

As to the statement that the relief of pain is not a safe guide in treatment, I can only say that in my own work I have always felt somewhat secure when my patients inform me that they are free from pain.

As to the treatment, the most important matter from a prophylactic standpoint is the subject of excess secretion, and matters pertaining to the general state of health, such as nervous symptoms, anemia, debility and sub-nutrition, should be cared for. Every effort should be made to decrease the stomach secretion and increase the general state of health.

When the diagnosis has been made the patient should be put to bed and the strictest discipline insisted upon in the way of complete rest, diet, medicine and hygiene. Failures in medical treatment come from indifferent or incomplete discipline, and by its observance such complications as hemorrhage and perforations are minimized. At least three weeks (preferably five) in bed should be insisted upon, and appropriate treatment should then be instituted for several months, even though the patient be symptom-free of ulcer. Even under the best of conditions and in the best hands failure results, and this is especially true in perforation, post-ulcer sequelæ, and chronic ulcer. I believe that uncomplicated ulcer, in its early stages and when properly cared for, is always a medical condition.

It cannot be denied that surgical intervention, with its improved technique, and with more careful selection of cases, is showing a marked diminution in mortality and increased success each year. Surgical interference in hemorrhage of the copious type is contraindicated. In perforation, always a surgical condition, medical treatment can show 5 percent recoveries, while early surgery shows 65 percent recoveries.

Post-ulcer conditions, such as hour-glass contraction, pyloric stenosis, peri-gastric adhesions, persistent gastrosucorrhea, are all surgical conditions. My experience has been that a majority of true chronic ulcers are surgical conditions. Some such cases can be relieved, or even cured by medical therapy, but the percentage is exceedingly small.

I have never seen or heard of the comparison of gastric ulcer with anal fissure. Those of us who are called upon to treat the latter condition know that when it is superficial a well-directed local treatment as a rule effects a cure; but when it has become a chronic ulcer involving the external sphincter muscle and surrounded by cicatricial tissue, surgery is our only hope of effecting a cure.

In conclusion, I hold to the opinion that gastric and duodenal surgery should be performed by men well qualified for such work. This is no work for the novice, but calls forth the best work of which the best surgeon is capable.

DR. W. D. ASBURY (Terre Haute): This symposium presupposes two lines of treatment for gastric and duodenal ulcer—medical and surgical—and our earnest effort should be, not our individual thought about the matter, but the thing that will bring the most good to our patients, whether that be medical or surgical treatment.

The term "peptic ulcer" is not a good one and should be discarded. It is misleading.

As to the cause of gastric and duodenal ulcer, perhaps no one has solved that problem. The experimentally produced gastric ulcers, such as those produced by Carlson, are not at all comparable with the ulcers one finds in his patients, nor is the healing of these ulcers to be compared with the healing process in actual practice. The predisposition of the patient, the lowered resistance, and many other factors make an artificially produced gastric ulcer very different in its formation and healing from those ulcers in patients who come to us for treatment. Hyperacidity, whether the result or the cause, has something to do with gastric ulcer in most cases, and good results have been accomplished when this acidity is scientifically controlled both day and night.

Every patient coming for examination for gastric and duodenal ulcer should have a blood Wassermann, and pulmonary tuberculosis with stomach symptoms should be carefully excluded. In making a diagnosis no one symptom or test is sufficient. A comprehensive and accurate history is of prime importance. A fluoroscopic examination is often of greater diagnostic value than an x-ray on account of motility and mobility.

DR. F. W. FOXWORTHY (Indianapolis): One of the essayists has, of his own volition, designated two periods in the life history of gastric ulcer. The first is the period before the ulcer exists, which he kindly assigns to the internist; the second, or the one of actual existence from beginning to end, he has the delusion belongs to the surgeon only. May I not add a third period, which often occurs after operation and only too often is sent to the internist for relief—the period of recurrence of previous symptoms. The great life insurance companies find that applicants who have had a gastro-enterostomy have a higher mortality than when the ulcer is treated by medication; Smithies, reporting 273 cases of gastro-enterostomy for ulcer, shows only 20.9 percent free from clinical symptoms afterwards.

Judd reports 101 cases of jejunal ulcer following gastro-enterostomy, 25 percent of which showed foreign material (threads).

Asche, four years after a gastro-enterostomy, found a double thread two inches long, causing the ulcer.

Mandl shows fully 200 cases of post-operative peptic ulcers. He states that scraps of silk suture have been found so often in the vicinity of peptic ulcer that there can be no doubt this is a contributing factor in some cases.

Haberer, with 205 cases of operated duodenal ulcer, states that gastro-enterostomy does not give very satisfactory results. He has several times been obliged to operate for recurrence when the pylorus has been cut off.

Payr, reporting 59 cases of duodenal ulcer operated, is pessimistic as to the outcome, referring to the comparative frequency of peptic ulcer after radical intervention.

Davis reports from 15 to 40 percent of operations performed for gastric ulcers as failures; at least, they do not restore the patient to sound health.

Eusterman, reporting 82 cases of post-operative ulcer from the Mayo Clinic, states 47 followed gastro-enterostomy elsewhere.

Eggleston reports only 42 percent of cured ulcers from gastro-enterostomy.

Moynihan believes the most rational of all methods of treatment is that introduced by Sippy, which appears to meet those conditions in the stomach which must be controlled before an ulcer can have a chance to heal. He further states that a really serious attempt to treat all

cases of gastric ulcer by medical treatment should be made.

I quote from Dr. George Crile, in a personal letter to me dated September 24, 1921:

"Medical treatment should be given a thorough trial at first, excepting in the following cases, when surgical intervention should not be delayed:

"1. Obstruction of the pylorus.

"2. Marked perigastric adhesions interfering with the emptying of the stomach.

"3. When medical treatment has been given a thorough trial without any relief of symptoms.

"4. In case of perforation.

"5. In the presence of persistent hemorrhage.

"6. When there is any question regarding the presence of carcinoma, either primary or developed in the site of an old ulcer."

I also asked a distinguished surgeon if, with all the knowledge he had of gastric ulcer and its treatment, he would allow himself to be operated on here for gastric ulcer. He replied, "Not at all. There are only three surgeons in the United States who could operate on me." I then asked him if he would submit to treatment by an internist, using the best medical treatment available, and his reply was in the affirmative. Is not this evidence conclusive?

Surgery has reached its highest point, according to many observers. Internal medicine is just starting, and within the next few years even greater advances may be expected. The Mayo Clinic recognizes this in their installation of 400 beds for internal medical treatment. Our hope is that Indiana surgeons may not be laggard, as the wheels of Progress are continually moving onward.

DR. GEORGE W. MCCASKEY (Fort Wayne): In regard to the etiology of gastric ulcer, there are a number of factors, chemical, vascular and others, which affect the continuity of the gastric and duodenal mucosa. I think it has been fully established that traumatism and chemical factors cannot produce a typical clinical ulcer, such as we have to deal with in our patients, and if that be true, what is the ultimate, final cause of the ulcer? My belief is that Rosenow's view of the elective affinity of certain bacteria for the stomach, kidneys and other organs furnishes the most plausible explanation of gastric ulcer. I also believe that the infection is always hematogenous in its approach to the stomach, and that were it not for this hematogenous infection of the stomach we probably would never have a typical clinical ulcer. That may be dogmatic, and of course we must wait for further information and evidence before we can positively decide this question; but that is my personal belief.

The treatment I think should first be medical, and for a long enough time to prove that medical treatment is inefficient. I think it should not be surgical until it has been proven that relief from medical treatment cannot be obtained.

I would like to protest against the too routine performance of gastro-jejunostomy. First, because of the perverted anatomy and physiology which it leaves; second, because of the not infrequent occurrence of jejunal ulcer; third, because in a large number of cases in which jejunal ulcer does not occur, there is persistent jejunal irritation, or possibly erosions which leave the patient symptomatically unimproved; fourth, because it fails to cure many cases, and fifth, because the operative hazard to life, while very small with highly skilful surgeons, increases greatly in the hands of less skilful operators, and cannot be ignored.

In general, it may be said that the results of medical treatment in a very large proportion of cases is quite as good as the surgical, unless extensive induration or threatened malignancy obtains, neither of which is cured by gastro-jejunostomy.

The recurrence of ulcer after medical treatment will become less and less frequent when both the internist and patient do their duty. The former includes the removal of etiologic factors and the careful education of the patient as to his future regime over a period of years. The latter, a strict compliance on the part of the patient with instructions given, with the distinct understanding that the ultimate results depend quite as much upon him as upon the physician.

DR. H. O. PANTZER (Indianapolis): Speaking of the etiology, one factor has not been mentioned which to me seems of great importance. I refer to anatomical irregularities of the stomach and its neighboring organs. They do prevail to a surprising extent. And they do give rise to functional disturbances which go with physical insult, chemical irritation, and infection.

I have for thirty years observed this line of thought incidentally to my surgical work. My first case was reported in 1891, and since that time I have frequently published my further observations and conclusions. I am convinced that anatomical irregularities are the predisposing and primary cause, not only of gastric ulcer, but of all abdominal diseases in a large percent of cases. I have also convinced myself that many of the ills of infant life—now too freely ascribed to impaired mother's milk, and errors in diet—in reality are owing to congenital anatomical irregularities of form and position, and the subsequent disturbances of function.

At first Nature, so to speak, "balks", then creates a temporary tolerance of them, which processes repeat themselves. Later these conditions are recognized as formidable pathological entities, of which gastric ulcer is but a sample. With light touch (as practiced by the blind), with x-ray, and with intensive study of the symptomatology and its causes, we will—I may hope—learn to recognize these conditions in the infant, and then shall operate these conditions early and thus avert long suffering ending in final critical disease, as which alone we now treat them.

DR. W. H. FOREMAN (closing): In regard to the acidity of the stomach, I made the statement that the amount of acidity was of little value in diagnosis because so many other conditions can produce hyperacidity; but that after ulcer has been diagnosed, then the amount of acid in the stomach assumes great importance in the treatment.

The discussion this morning has evidenced the general opinion of the medical profession of the state of Indiana. Two or three years ago if we had discussed a symposium like this the surgeons would have jumped all over us and said that ulcer belongs to the surgeon exclusively. Now the general opinion among the profession is that ulcer belongs to the internist for diagnosis and for early treatment at least, and if it does not respond to treatment, then surgical assistance is necessary. Even after surgery the patient must have as careful medical and dietary treatment as if no surgery had been performed.

What Doctor Porter says may be true. I said in my paper that not all cases are cured, either medically or surgically. I have had cases where the surgeon has operated and the patients have had a recurrence.

DR. J. R. EASTMAN (closing): With relation to Doctor Foreman's statement that two or three years ago the surgeons would have said that every stomach ulcer is a surgical condition, I do not agree with him. Surgeons were hardly so radical as that.

I think Doctor Foxworthy is unduly alarmed at the aggressiveness of the surgeons in this particular field. I do not think the surgeons demand that they be permitted to operate in every case of gastric ulcer. As a rule we do not see these cases until there are perigastric adhesions, hemorrhage and stenosis, and then they are indeed surgical cases. There is a time for medical treatment of gastric or duodenal ulcer, and there is also a time for surgical interference. We must remember the relation of carcinoma of the stomach to ulcer. Every ulcer may become a cancer, and as was said by Dr. William Mayo, every cancer of the stomach was probably at one time an ulcer.

THE PHYSICIAN

"THE REJUVENATION OF MEDICAL ETHICS"*

FRANK B. WYNN
INDIANAPOLIS

Perhaps there is no phase of medicine concerning which there is so much misinformation as concerning the commonly designated "Code of Medical Ethics". Almost without exception, intelligent people know of the existence of a pact amongst decent practitioners, but the knowledge is vague. Some entertain the view that it is a sort of oath; others that it is a traditional custom descended from the ancient fathers in medicine; quite general is the opinion that it is an unwritten law of the profession containing obsolete rules of conduct, neither justified in wisdom nor right, but which long usage makes it impossible to shake off. In the lay press the view is often expressed by inuendo if not by direct words, that "Medical Ethics" is a species of folly characterized by narrowness, not at all in keeping with the spirit of modern progress. By those outside the pale of organized medical forces, this idea is held aloft and painted with ridicule. Should there not be some concerted and forceful effort made to correct these erroneous ideas entertained in the public mind?

How remote these conceptions are from the truth, all know who are familiar with the Principles of Medical Ethics. It represents a most commendable effort on the part of the intelligent and progressive elements of medicine, to conserve the idealism of the medical past. It seeks to elevate the standards of practice and scientific attainment, of gentlemanly and moral conduct, for the benefit of the patient first of all; for the mutual instruction and elevation of the profession; and in the interest of the public weal. Should we ever fall from these high standards, we will no longer be worthy the designation of a profession, but must march in the ranks of tradesmen.

Searching for the causes of public mistrust of the "Code" they are found to exist in ignorance concerning its nature and purposes. Laymen are excusable for these erroneous conceptions and misapprehensions. I never yet have talked to one who had read the Principles of Medical Ethics. His knowledge of it came through hearsay or isolated acts of physicians which he could not understand, and not comprehending the rational and moral grounds for such action, he was likely to consider it queer and senseless. And so very naturally, one might say quite justly, our "Code" has come in for gibes and sneers. Physicians themselves not rarely also show their ignorance of the scope

*Seventeenth of a series of articles by Dr. Wynn which will appear regularly in THE JOURNAL.

and purpose of this instrument by falling in with the public judgment and condemning it by faint praise. In truth can the profession as a whole claim that any moving faith animates the rank and file in support of this "Charter of Achievement, Responsibility and Conduct"?

Had not progressive men from time to time in the history of organized medical development, made conscientious effort to formulate "By-laws" or "Principles" as a guide to professional conduct, they would have been most recreant to duty in their day and generation. As well think of the American Commonwealth without a Constitution, a religion without a creed, or the Bible without its Ten Commandments. Our "Code" is not a perfect instrument —never can be. With evolution in medical progress it will need revision to meet the changes which wisdom and experience have proved out, and found not wanting. For the present it will be to our mutual advantage to know better our commandments of "Shalts" and "Shalt-nots".

It is surprising and rather disheartening how few medical men are familiar with the Principles of Medical Ethics. This explains why they do not more frequently come to the defense of its teaching. This is owing in part I believe to the fact of its stilted form. That it is framed by Chapters, Articles and Sections is in conformity with usage in the writing of Constitutions and By-laws. This method has its practical value in enabling one to find quickly certain articles of the instrument. But it is open to the very serious objection that it lacks in readable qualities which hold one's interest and attention. Constitutions are very important in setting forth the aims and rules of action in organizations, but who takes any particular delight in reading them? They possess a sort of stereotyped monotony of mechanism which is repellant to enthusiasm. However fine and fundamental may be the American Constitution, does one gather enthusiasm from perusing its contents, as he does from reading the Declaration of Independence? The former is cold, concise to the point of mathematical exactness, so carefully wrought that not a word can be spared. It is the bulwark of wisdom and farsight, coming out of the fertile brain of Hamilton, protecting the liberties gained at so great a price, against future calamity. It is utterly devoid, however, of appeal to the imagination or emotions. In contrast to Hamilton's master work, contemplate the immortal instrument penned by Jefferson. It burns with righteous indignation, kindles the flame of patriotic fervor and lights the torch of liberty. Who is not proud of both? One served to arouse the builders of a republic to action and having served the purpose of the day, lives now chiefly as a beautiful historic sentiment. The other became the permanent foundation upon which the governmental structure of liberty rests.

In our present state of national unrest, following the world-war, millions of unassimilated foreigners upon our shores fail to comprehend the significance of American institutions. The American Constitution, however wise and just, is a cold and meaningless thing to them. Is not the imperative duty of the hour to read into the Constitution the spirit and the fire of the Declaration of Independence in order that they may know the price paid for liberty? When we who have enjoyed these blessings are aroused by a zeal like Paul of old, to proclaim again and again upon every hand, the sacrifices and the spirit out of which and through which our country has grown, there will come to these peoples conviction and conversion. As soon as they are nationally born again they will become fit subjects to live and work under a wise governing Constitution.

By analogy may it not be said of our constitution, "The Code of Medical Ethics," that like the American Constitution, it too needs to have read into it an awakening spirit of medical evangelism—which will renew the faith and arouse to more determined influence and power in medicine. For may it not be true that we have been carried from safe moorings by the world-wide wave of materialism? The captains of industry have occupied the stage of chief interest in our day and generation. Likewise the captains of medicine have marched to material conquest in laboratories, revealing cold facts; along the avenues of specialism, searching for isolated and unemotional truths—all splendid and serviceful achievements taking little account, however, of man as a thinking, feeling organism. In the light of these facts is it not well that we should come to our medical senses, giving proper evaluation to the ethical and moral phases of medicine.

It must be granted that the Principles of Medical Ethics is a remarkable instrument comprehending the very essence of wisdom which should govern the conduct and widen the vision of every right-thinking physician. But a deplorable weakness lies in its cold, stereotyped, constitution-like manner of presentation, which repels rather than invites contemplation. Certainly it has failed to bring conviction to the public mind, which views it with ill-concealed contempt. Nay, even more. There often arises wide-spread suspicion of concerted endeavors of physicians for the common weal. Is it an impending epidemic of small-pox in which general vaccination is urged, the cynical voice of suspicion is raised, charging the medical profession with planning a vaccination harvest. Should unsanitary conditions threaten the health

of the community and a courageous group of physicians take a firm stand for their correction, they may expect slanderous criticism of their motives. And among the opposition will sometimes be found the reactionary physician, who has become myopic to the broader view of Medical Ethics.

But of all the scoffers at the tenets of our medical creed, none equals in numbers or virulence of accusation the quasi-medical sects—the "rubbers" and "healers". When concerted effort is made by the profession to require of these mushroom practitioners the same fundamental literary and scientific training which accredited physicians must take, they protest furiously, crying persecution and monopoly. Thus have these anti-medical agitators and pseudo-practitioners shouted themselves into a position of prominence in the public mind. So securely established are they that legislatures pay homage in negative conduct regarding reforms, and because of their substantial contributions to the advertising columns of the lay press, the latter gives them a fattening publicity. Stoically we have suppressed our emotions and borne their brazen aggressiveness. The professional brain is dizzy with apprehensive anxiety of what may come to pass.

But let not the intensity of our zeal to punish or restrict the "irregulars" blind us to the existence of our own professional delinquencies. However venal and offensive their acts, has our conduct been above the suspicion of mercenary ambitions? Note the large number of general practitioners entering special fields, frankly confessing the motive is greater ease and larger income. Even the tendency of the time to group practice finds its most frequent argument a desire to augment incomes rather than cooperative study, and productive scientific effort. This statement is borne out by the fact of frequent failures of group efforts, from wreckage upon the rocks of financial controversy. If one would be still further convinced, listen to the casual conversation of a group of medical men in the physicians' waiting room of a general hospital. The theme of discussion is not so likely to be a recent article of great scientific interest, or the superior investigative work of some struggling young practitioner, but gossip about the volume of work or incomes of supposedly successful specialists.

Too generally the profession has become obsessed with the idea of magnitude, in practice rather than quality of work, or contributions to professional betterment. "Big Business" in medicine, like in the commercial and industrial world, may produce a few medical plutocrats, but its tendency will be to lower the general professional tone, and establish false standards of practice. It is not in keeping with the ancient traditions of medicine, nor consonant with "The Principles of Medical Ethics" that we should bow down before the Mammon of avarice.

Finally, may it not be contended that sufficient argument has been offered to justify the conclusion that there is urgent need, in these times of medical unrest, for a rejuvenation of "The Principles of Medical Ethics"? Let this instrument be considered not merely an epitome of the laws governing the moral conduct of physicians but a living, moving force to promote the ideals of medical progress. As the Decalogue was to the ancient Hebrews, so let the profession of medicine find light and guidance in a revival of *"The Ten Commandments of Medical Ethics"*.

THE TEN COMMANDMENTS OF MEDICAL ETHICS

I. *Reverence and Responsibility.*
Remember thy Creator in the days of professional youth. Bow reverently before the wonderful human body, sick or well, as thou wouldst before a sacred shrine, conscious of thy high duty; resolved to serve to the best of thy power, whether the patient be black or white, prince or pauper, saint or degenerate.

II. *Historic Appreciation.*
Honor thy father and thy mother. Likewise give praise to the fathers in medicine whose rich heritage of scientific and clinical truth has been handed down to thee through centuries of patient toil. Hold fast to that which is good, but let not prejudice coming out of the past blind thy vision to the newer truths of medical advancement.

III. *Keeping the Faith.*
Thou shalt not worship the graven images of false practice—of avarice and selfishness which eat at the very heart of medical idealism; of clever artifice or brazen quackery which knowingly deceives; of erratic isms and cults which tell but half truths, leading the ignorant and unwary astray.

IV. *Inviolable Confidences.*
Thou shalt not disclose the secrets confided to thy keeping by trusting patients unless they be of criminal or treasonable import. Nor shalt thou abuse the professional intimacy granted to thee by women, which becomes a professional and moral obligation thou shouldst hold inviolate.

V. *The Sanctity of Life.*
Thou shalt not hazard life unwarrantably; neither shalt thou shrink before the obvious perils of duty when life is at stake. The unborn shalt thou not destroy except after due consultation, it is deemed advisable for the larger saving of life. Suffer not death to

come through neglect in care of the sick, nor from failure in reading, study and counsel to gain the greatest benefit for the patient.

VI. *Professional Cooperation.*

Thou shalt not bear false witness against a worthy professional brother, but seek ever to protect his good name from calumnious attack by misinterpreting laymen. Of thy knowledge give him unstintingly, counselling and cooperating for medical progress.

VII. *Gentlemanly Conduct.*

Thou shalt not prate of cases nor countenance unseemly boasting of thy achievements in the lay press. Always a gentleman, let thy conduct be reserved but without cowardice; courteous but free from flattery; dignified but of warm heart; tender in ministration but firm in command; clean of body, speech and mind.

VIII. *Honesty in Business.*

Thou shalt not steal; neither shalt thou make extortionate charges nor deceive by the secret division of fees. As a laborer worthy of hire exact fair compensation but by open methods and with conscience void of offense toward thy fellow-man.

IX. *Obligation to One's Own.*

Take heed of the morrow for the sake of thine own flesh and blood. Therefore shalt thou keep orderly accounts, collecting from the full-handed just recompense for services rendered. To the poor and the families of deserving colleagues, thou shouldst account it a privilege to render faithful attention.

X. *Personal and Public Service.*

Remember thou art thy brother's keeper—physically in the measures and remedies advised for the prevention, alleviation or healing of disease; spiritually in the cheer thou bringest to heavy hearts and the courage thou givest to halting steps. So walking upright before man, mayest thou shew thyself approved unto God. Thus journeying toward life's end, if not singing with the Psalmist "My cup runneth over," thou wilt at least be sustained by the reflections of "A workman that needeth not be ashamed."

The Season's Greetings to the Readers of the Journal

from

The Editor and Editorial Staff

THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION
Devoted to the Interests of the Medical Profession of Indiana
ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.
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DECEMBER 15, 1921

EDITORIALS

BRAIN ABSCESS

At the New Orleans session of the A. M. A., April, 1920, a very interesting paper on the surgical treatment of brain abscesses was presented by Adson of the Mayo Clinic, and the same is reprinted in the Collected Papers of the Mayo Clinic, Volume XII, 1920, just from press.

An interesting feature of the discussion is that the principle causes of pyogenic brain abscesses are middle ear diseases, frontal sinusitis and trauma, with the former predominating. In this connection statistics are quoted in which Heimann reports a series of 510 cases of brain abscess of otitic origin in which 457 were due to chronic otitis media and 173 to acute otitis media. This is significant evidence that brain abscesses are prone to occur in chronic suppurative conditions and may occur in cases of empyema, osteomyelitis and general septicopyemia as well as in cases of infection of the middle ear and frontal sinus. The abscess may arise from an infected area and extend into the brain by contiguity, such as those following infection of the middle ear or frontal sinus, or it may develop at a distance from its etiologic factor and be a part of a hematogenous or lymphatic infection. In the 26 cases operated at the Mayo Clinic, five were traceable to chronic otitis media, six to frontal sinusitis, two to frontal sinusitis with osteomyelitis, four to injury of the skull, five to chronic empyema, and one each to chronic empyema with septico-pyemia, pulmonary tuberculosis, lung abscess and bronchiectasis.

The clinical findings showed the average white cell count for the entire group as sixteen thousand, though in a few instances the leukocyte count was normal. Urinalysis was negative for all but four patients and those showed symptoms of acute nephritis. There was increased intracranial pressure in all. Spinal fluid and blood Wassermann tests were positive in two of the twenty-six cases, and this is considered interesting in that neither of these two patients had any corroborative symptoms of syphilis. The choked disc ranged from one to seven diopters. A resumé of the findings reveals urinalysis usually negative, a slight leukocytosis, and, if the abscess is unattended with meningitis or cortical encephalitis, a negative spinal puncture. One-third of the patients studied had choked discs, ranging from one to seven diopters, one-third had local tenderness over the abscess, and one-half had motor or mental impairment.

The duration of the symptoms varied from three days to three years, and each case followed one of three distinct courses. Sixteen patients had an average duration of symptoms of thirty-two days; four of these were operated on for brain abscess and promptly died. The five who recovered following a drainage of the abscess had an average duration of symptoms of six months; five patients had an average duration of twenty-seven months; two slowly recovered, and three died; two developed secondary infection and encephalitis, and one received an injury which ruptured an old abscess into the ventricle.

According to Adson a brain abscess may pass through three distinct phases: the initiatory, the quiescent, and the terminal. It should be operated on in the quiescent stage, not in the initiatory or terminal, as is frequently done. Of the patients seen at the Mayo Clinic, 16 were in the initiatory stage which did not pass into the quiescent stage. Those who were operated and recovered were treated in the quiescent stage when the immunity was the highest. In the terminal stages patients sometimes recover without operation, but the chances are greater that a secondary infection and death will occur.

In concluding, Adson says:

"1. The four principal etiologic factors in the formation of abscess of the brain are otitic infection, frontal sinusitis, injury to the skull, and hematogenous infection. Brain abscess is usually single, except when it is of hematogenous origin associated with a general pyemia, and then frequently it is multiple.

2. A brain abscess in its course may pass through the initiatory, the quiescent, and the terminal phases. The different stages can be determined more definitely from the history and duration of the complaint than from the physical findings.

3. If the abscess has developed by contiguity it should be explored through the area of infection, but if the abscess is remote from the source of infection, it should be explored and drained through an osteoplastic flap craniotomy.

4. Surgical treatment is of little value in the initiatory or terminal stages, or in the presence of meningitis, but it is of great benefit during the quiescent stage. If there is doubt as to the differential diagnosis of brain tumor and brain abscess in the quiescent stage, it is advisable to explore rather than to perform a decompression operation for intracranial pressure or to wait for terminal symptoms."

INTRAVENOUS MEDICATION

Before now we have had something to say concerning intravenous medication other than that included in the intravenous injection of arsphenamin or neo-arsphenamin, and in view of numerous letters of inquiry from readers concerning intravenous medication proposed by certain doctors who exploit dangerous methods of treatment and extol the virtues of drug compounds of secret composition, we feel justified in again calling attention to the subject.

Intravenous medication, as pointed out by the *Journal of the A. M. A.*, no matter what is used, is more or less dangerous. It should not be undertaken except under painstaking technique by one who has had training and experience in that class of work. Furthermore, the product injected should be definitely known as to composition and purity, and its effect also known as a direct result of experimental work by competent and trustworthy clinicians. At the present time a number of firms, as well as individuals, are advertising by circulars, and otherwise, various kinds of intravenous medication, and in practically every instance the firm or the individual exploiting such treatment is not one that through established reputation or experience in using the procedure or preparation recommended can be considered entirely trustworthy. Aside from this the preparation exploited is generally one of secret composition, and that of itself is sufficient to condemn it.

As a further contribution to our condemnation of certain forms of intravenous medication we herewith reproduce our answer to a letter of inquiry:

November 22, 1921.

—— — ————, M.D.,

DEAR DOCTOR:

Answering your letter of November 19 will say that we condemn all kinds of intravenous injections, or for that matter the prescribing in any way, of preparations of secret composition. Loffler's Intravenous Compound is included.

Many varieties of fakes and many species of quackery are offered to members of the medical profession for adoption and use. The really conscientious and ethical physician will refuse to use anything that is offered him unless proof of its value can be secured from a trustworthy source. The Council on Pharmacy and Chemistry of the A. M. A. is doing a wonderful work in placing its stamp of approval or disapproval on medical preparations or practices that are offered to the medical profession for adoption and use. You can not go wrong by following the advice or suggestions of that body. Every month we print a resumé of the work of the Council, and yet we know that some of our readers are conceited enough or ignorant enough to think that their judgment is superior to the judgment of some forty or fifty of the most eminent and qualified physicians in the medical profession.

Among the men exposed by the Council as quacks is Dr. Loffler, and among the fake preparations exposed is Loffler's Intravenous Compound. It would seem that any doctor who has any sense of honesty or cares to maintain a reputation for professional ability would refuse to have anything to do with Loffler's Intravenous Compound. However, it is quite possible that some doctors like to be humbugged, though it is more reasonable to suppose that some doctors, while not being humbugged themselves, are using a humbug to humbug their patients, and all for the sake of pecuniary gain!

Sincerely yours,
THE JOURNAL OF THE
INDIANA STATE MEDICAL ASSOCIATION.
By Albert E. Bulson, Jr.,
Editor and Manager.

RADIUM TREATMENT OF CANCER

In an editorial in the November issue of THE JOURNAL we quoted Deaver's recent statement to the effect that radium treatment of cancer has been disappointing and that he doubted if radium had produced *any* beneficial effect in the treatment of cancer. We questioned the truth of the statement, and called attention to the fact that while it may be that radium is not proving as valuable in the treatment of cancer as some have believed, yet it will take more than the conclusion of one man, no matter how eminent, to change the opinions of many serious workers and hundreds of cured patients concerning the effect of radium in the treatment of cancer. We now have a communication from Dr. Charles Goosmann, of Cincinnati, in which it is pointed out that Dr. Deaver evidently was referring to deep cancers, as the curative value of radium in skin cancers is everywhere acknowledged. In further discussion of the subject Dr. Goosmann says:

For a good many years it has been conceded that radiotherapy held out the only hope in inoperable cancer of the uterus. I have two cases that are well for 4 1/3 years and 1¾ years, respectively. Both had an exploratory laparotomy, but were too far advanced for any surgical treatment. In the one case the result was so good that a physician who saw the patient after the treatment declared there had been no cancer. A section of the tumor, however, had been retained.

In more recent times it has been conceded that the so-called border-line cases do better with radiation treatment than with surgery. The question today is whether, in early and operable cases, radiotherapy can give a larger percentage of permanent cures than operation. I believe this can be definitely answered in the affirmative. It must be borne in mind that removal of the uterus, followed by radium treatment, is not so satisfactory because

1. The intra-uterine application of radium permits much larger doses than can be tolerated in the vagina.

2. Radium inside the uterus is placed at about the center of the pelvis and therefore can reach the deep structures better.

3. It is an open question whether removal of the uterus does not frequently scatter the cancer cells throughout the pelvis.

Radiotherapists for some years have been very conservative in their statements. In fact, most of the published claims for this form of treatment in operable cases have been made by surgeons, who have taken it up. Here there could be no claim of prejudice, since obviously, they could take it or leave it alone, and the results had to be very encouraging to

overcome that trait of humanity which "makes us rather bear those ills we have, than fly to others that we know not of". It would be strange if a treatment that cured even one advanced and inoperable case could not succeed a good deal better with early cases.

Recasens[1] of Madrid has treated over 400 cancers of the cervix uteri with radiation in the past seven years, and believes that radium plus x-ray is undoubtedly superior to any other method of treatment.

Heyman[2] of Stockholm, Sweden, considers 20 percent a liberal estimate of *operative* cures. He has 66 cases treated with radiotherapy, of which 28.8 percent have been well for five years. All of these were inoperable except seven, of which number five (44 percent) are well.

Opitz[3] of Freiburg, Germany, judging from the literature and his own results, which are constantly improving, feels convinced that uterine cancer can be permanently cured with radiation alone, and probably in a larger percentage than with operation. He, therefore, does not operate them any more.

Seitz[4] of Erlangen, Germany, after discussing his results, says: "It is, therefore, comprehensible that we have come to the conclusion, at first hesitatingly, but now with more assurance, to treat all uterine cancers with radiotherapy, either radium and x-ray combined, or the new method of x-ray alone." (He does not believe radium alone quite so satisfactory.)

That these opinions are not confined to foreign observers can be easily shown. Ransohoff[5] was one of the first to emphasize the advantages of radium treatment as compared with operation, in early cancer of the cervix. Recently Duncan[6], Barrow and Frank[7] and Clark and Keene[8] have expressed similar opinions. All but one of these American writers are surgeons; only one of them is primarily a radium therapist. I will quote from Clark and Keene: "In comparing the vast outlay of surgical effort put forth in the latter class of cases with the great dangers attending the radical operation, as to both mortality and disabling results, we feel convinced that the time has about, if not quite, arrived when we shall cease to speak of any operable cases of cancer of the cervix, but shall submit them all to irradiation. Certainly our results have led us convincingly in this direction. As the palliative results have been so excellent and, as our statistics now appear, the actual cures have been so relatively large in the hopeless cases, it would appear illogical to submit the early operable cases to the great dangers of surgical intervention and reserve only the inoperable case for irradiation. While we still discuss operability, we are turning to this method of procedure in such a small minority of cases in our clinic as to carry our statistics in this line almost to the vanishing point.

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SOCIALIZING MEDICINE

[Bulletin of the Wayne County (Detroit) Medical Society]

A member of the Legislative Committee of the Michigan State Medical Society has the following to say concerning efforts that are being put forth to socialize the practice of medicine:

"If we are fighting today with our backs to the wall to prevent the socialization of medicine and the degradation of the individual, it is because in our race for bigness, we have permitted our moral and intellectual clearness to be befogged. As individual practitioners of medicine, we have boasted of our great national organization and its great Journal. We took pride in the fact that the A. M. A. was worth almost a million dollars in quick assets, and that the income of its Journal was reaching toward that princely sum of one million dollars for one year's income. We bragged that our association numbered its members by the thousand, but we forget to ask Huxley's pertinent question, 'What have we done with it?'

"When we cast up accounts, our pride is due for a hard fall.

"We have permitted our great national organization to become the plaything of 'paper philosophers', men too rich or too tired, or too lazy, or too ambitious to tread the thorny path of the practice of medicine; men who prefer the job of telling us what to do, to doing it themselves; men who chafe at the long, tedious apprenticeship of the physician and surgeon but prefer short cuts to positions under various names; men whose sole aim is to sit on a throne, directing and controlling a horde of medical slaves who are to do all the work, take all the responsibility, but to pass up the rewards. And all of this has happened, because we have been too busy growing big to be sure that we were growing just. We gave these men power and, like Oliver Twist, they wanted more. It is a human failing, for all men are potential despots at heart.

"We have seen our good money paid out in salary to an avowed apostle of Compulsory Health Insurance by the Council on Health and Public Instruction of the A. M. A., at the bidding of a chairman who was a shining light in the councils of the American Association for Labor Legislation, sponsors for the socialization of medicine. And we were asked to accept the report of this apostle and his brother of the A. A. L. L. as being disinterested.

"This year, we were treated to the spectacle of a leader of the A. M. A., a gentleman who for years has been a power in shaping the policies of the A. M. A. and its Journal, appearing before the House of Delegates to repudiate a speech, favoring Compulsory Health Insurance, which he had made some time ago and which

had been printed in the *Journal of the American Association for Labor Legislation*. He did not claim that he had not been fairly reported, but now that he was a candidate for re-election as Trustee, and the A. M. A. had gone squarely on record as opposed to Compulsory Health Insurance, he wanted to take it all back. A man has a right to change his mind, but to the disinterested observer that change would have been in the better taste if announced at a time when the candidate was not looking for votes.

"And to add to the strangeness of the situation, we found men who were openly favoring 'State Medicine' on the score that it means bread and butter to them, jumping in to back up this candidate who was recanting the very opinions his backers were favoring. These Public Health Officials waxed indignant as they denounced the men who had brought out this speech of the candidate's in favoring socialization. They called upon the House of Delegates to try them for treason and to boil them in oil if necessary. And what had these men done who were being thus roundly abused? They were simply trying to find out whom this candidate would represent, if elected. He had preached Compulsory Health Insurance in the A. A. L. L. Journal and the question of moment was, will this candidate, if elected, represent an interlocking directorate of the American Association for Labor Legislation and the A. M. A., or will he represent the overwhelming majority of the medical profession who are opposed to the measures for which the socializers of medicine stand? The candidate was elected after a hard fight. Time will tell, but vigilance alone will be the price of knowledge.

"We have lived to see Johns Hopkins fix a fee for a week's care by a physician at $35, a salary which many a taxi driver will scorn. All these things we have seen, and the question is, what are we going to do about it? That no man shall be able to plead ignorance of existing conditions is the purpose of the BULLETIN. The profession must fight. If necessary, take a beating and fight again. Our socializers hope to tire us out, but once we drive them into the open, take from them their brazen shields of wealth, position and reputation, behind which they are hiding, then and only then, will the overwhelming majority who pay the freight come into their own again and the A. M. A. represent the physicians of this country and not be the mouthpiece of our 'Paper Philosophers'."

DRIFT TO SOCIALISM

Now that the Sheppard-Towner maternity—so-called—bill is a law by virtue of the President's signature, the American people would do well to ask themselves whether the swing to socialism has not gone quite far enough, and whether it should not be stopped. The bill in question is thoroughly bad. But it is now a law, so there is no call for a further discussion of it. Its effects, or non-effects, will be carefully watched. There will be great pressure on the legislatures of the states to appropriate large sums of money in order that they may get some of the money to be appropriated by the federal government. Such a partnership is dangerous, and fraught with great possibilities of evil.

But the broader question is whether our people are to take care of themselves or be taken care of by the government; whether they are to manage their own affairs, or permit the government to do so; whether they are to be the independent, individualistic, resourceful people they used to be, or mere wards of the central authority. The issues are weighty, involving as they do both the character of our government and institutions, and of our people. Every scheme of governmental aid ought to be viewed with grave suspicion, for all such schemes involve fundamental political principles.

So it is suggested that the American people should, if they would preserve their liberties, look to themselves and their government, and resolve that they will not tolerate in the future any policy that is inconsistent with the spirit of American institutions, or with the principles on which they rest. The tendency toward socialism is strong and the appeal of socialism is evidently most alluring to many of our people. This is shown by the character of our tax legislation, tariff policies, and class legislation of various sorts. There is no danger to be apprehended from Socialists as such, but there is real peril in socialism, which is making great strides, though it is not by many understood to be socialism.—*Indianapolis News*, Nov. 24, 1921.

THE LORENZ FIASCO

A few weeks ago Professor Lorenz, the famous Vienna orthopedic surgeon, who made quite a reputation and a very large fee for himself about twenty years ago by treating the daughter of P. D. Armour, of Chicago, landed in this country and announced that he had come here to repay a debt to America by offering his services gratuitously to the crippled children of America. He announced that he would hold clinics in the various cities of the country, and

he began his work in New York where hundreds and perhaps thousands of crippled children besieged the hospital where he was working in response to the advertising of the plans as given in the daily press. As we pen this editorial we learn that Professor Lorenz has abandoned his plan to continue clinics in this country, and all because his work has not received the sanction of some of the leading medical men of America. As to be expected, some of the lay publications are condemning the medical profession of the United States for having opposed Professor Lorenz, or perhaps for not having encouraged him in his work.

A little analysis of the facts pertaining to this episode may clear the atmosphere somewhat and show that Professor Lorenz is not wholly altruistic in his motives. When he came here over twenty years ago for the purpose of treating the Armour girl he probably was one of the best orthopedic surgeons in the world, he conducted himself in an ethical manner, his visit here was not opposed, and he was given a cordial welcome by medical men wherever he went. In fact he was given the opportunity of not only demonstrating some of his own orthopedic methods but he courteously was placed in a position where he could make thousands of dollars in this country by treating cases in some of our wealthy families. Since that visit orthopedic as well as all other surgery in the United States has made great advances, in fact now leads the world, and at the present time there are several surgeons in New York, as well as surgeons in every large city in the United States, who can do anything that Professor Lorenz can do. They not only are capable of doing bloodless surgery as well as it is done by Professor Lorenz but they are as willing to do it gratuitously for America's worthy poor. They are doing it daily in all of our large clinics, but they are not doing it with a blare of trumpets nor are they asking that their work be heralded through the metropolitan dailies as miraculous or even unusual. In fact it would be exceedingly distasteful to them were they to be advertised in the daily papers and in the moving pictures as Professor Lorenz was advertised.

It is the height of absurdity for anyone to think that Professor Lorenz is in this country because he so loves the American people that he wants to repay any debt of gratitude that he or his countrymen may owe. We feel satisfied that few if any Austrians consider that they owe us anything in gratitude or in money. They despised us for going into the war, and they attribute their defeat to the fact that we finally did go to the assistance of their enemies. Deep in his heart Professor Lorenz entertains no better feeling for us than the rest of his countrymen, even though now, with the war over and his purse depleted, he is quite willing to assume a suave demeanor and cultivate our friendship for the dollars to be gained thereby. Professor Lorenz knows that the crippled children of Austria, and particularly in his own city of Vienna, need his services right now far more than do the crippled children of America, and if he really possessed the altruistic motives in furnishing his services gratuitously he would be at home where he is so sorely needed, rather than in America where he is not needed and where the work that he has been doing can well be carried on by American surgeons who are as competent as he. The truth of the matter is that Professor Lorenz came to this country to recoup his fortunes, and he knew that he could depend upon the public press to advertise him well if he came in the name of charity. He knew that the advertising received would bring to him not alone the worthy poor but the rich as well, and that the latter would afford him princely fees for services rendered. Therefore the American surgeons in New York, Philadelphia, St. Louis and Chicago, who are reported to have been opposed to the Lorenz clinics in this country, have just reason for presenting a cold shoulder to such spectacular performances undoubtedly designed and carried out for personal gain.

There is no occasion for the deserving poor being uncared for in this country. There isn't a reputable surgeon in America who doesn't do a great deal of charity work and who is not willing to do a great deal more if approached in the proper manner for the services. Aside from this there are hundreds of well trained young medical men in all of our large cities who consider themselves most fortunate if they are able to gain experience by caring for the deserving poor who may apply in person at the clinics for aid or who may be brought there by the various organizations connected with social service. The great trouble is that our social service in the cities is not developed nor managed as it should be, and in consequence our medical men are imposed upon by the well-to-do, and communities are pauperized by the bestowal of gratuitous medical and surgical services upon the unworthy who do not hesitate to take advantage of it when the really needy hesitate about asking for such help. However, there are competent surgeons in New York who are doing as much and as good charity work as Professor Lorenz attempted to do, and they neither ask nor covet the advertising that has been given Professor Lorenz. When they do this day in and day out in an ethical and modest manner, is it any wonder that they do not look with favor upon the Lorenz fiasco?

DEATH OF DR. KIMBERLIN

As we go to press we learn of the tragic death of Dr. A. C. Kimberlin, of Indianapolis, which occurred accidentally, on December 14, while he was on a hunting trip in southern Indiana.

Perhaps no man in the medical profession of Indiana has been more loved and honored by his confreres than Dr. Kimberlin. He was president of the Indiana State Medical Association in 1913, and in making the announcement at that time we called attention to the fact that Dr. Kimberlin's career represents in a striking manner the romance of American life. Leaving the farm when a mere youth because he was dissatisfied with the opportunities it afforded for his future, he went to Indianapolis without capital other than sturdy parentage, a healthy body, a common school education, and a determination to succeed. A three years' course in the Indiana Medical College and one year's internship at the Indianapolis City Hospital constituted his immediate educational equipment for the practice of medicine, but with him, as with every other man who succeeds in medicine, the real school began when he left college and the hospital and began the practice of his profession. He was an indefatigable student and keen observer. His frequent attendance at clinics both in this country and abroad, his deeper interest in the success of the Indianapolis Medical Society, of which he had been both president and secretary, was inspired largely by a desire to become informed of the advances in scientific medicine. Although occupied by the exacting duties of a large private practice, Dr. Kimberlin devoted a great deal of his time to the teaching of medicine, and at all times was deeply interested in the success of the Medical Department of the Indiana University in which institution he held the chair of clinical professor of medicine. In addition to his official activities already mentioned he found time to serve upon the Indianapolis City Board of Health, to be actively identified with all of the prominent medical associations of local and national character, and for over twenty years was on the clinical staff of the Indianapolis City Hospital. In recent years he turned his attention exclusively to the subject of internal medicine, and he established for himself a reputation as a careful, painstaking and competent clinician and consultant. Probably no medical man in Indiana has been more loved by his confreres, for coupled with a pleasing personality he exhibited a sympathetic interest in the welfare of his associates, and at all times a sterling character so much admired among all men. His untimely death at fifty-eight years of age is a shock to all who knew him, and the medical profession of Indiana has lost one of its truly great men.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

To all our readers: A Merry Christmas and a Happy New Year!

LOST—Dr. Luke P. V. Williams of Greenwood is searching for a pair of twin boys, Lester and Chester Ford, seventeen years of age, who have disappeared from their home. Any information concerning their whereabouts will be gratefully received.

EACH one of our readers should read the department in THE JOURNAL devoted to Propaganda and Reform. In it will be found much valuable information concerning not only reliable and trustworthy preparations, but fake and near-fake remedies as well.

IT may not be out of place to call attention to the fact that those who fail to pay their medical society dues on or before February 1 are delinquent, and cannot receive the benefits of the Association and especially the protection afforded by Medical Defense. Why wait until the last minute and thus run the risk of being penalized unnecessarily?

WE know that the county medical society secretaries now are trying to collect dues for the coming year. Why not surprise your secretary by sending in your dues without being solicited? You know that your dues should be paid on or before January 1, so why not pay them now? It will save your secretary work, and his job is a thankless one anyway.

HERETOFORE there has been some complaint that some county medical society secretaries do not send dues to the Secretary of the State Medical Association as promptly as they should. This means that some members may become delinquent through no fault of their own. Members of county medical societies should remember that the county secretary, chosen by themselves, is their own representative, and the State

Association cannot be held responsible for dereliction of duty on the part of the county medical society secretary.

THE membership list of the Association, by counties, is published in this number of THE JOURNAL. In some instances members who are credited with membership in a county medical society are non-residents, but as far as possible the post office address is given with the name. The list has been checked by Secretary Combs and therefore ought to be correct. Incidentally it forms a part of the mailing list for THE JOURNAL and if any members desire corrections made they are requested to notify the editor of THE JOURNAL to that effect.

DOCTORS, lend your support and assistance to the Fourteenth Annual Christmas Seal Sale. What is it accomplishing? Listen: It is saving 75,000 lives a year. It is providing hospital care for 100,000 tuberculosis patients a year. Nearly 75,000 children are being restored to health in open air schools. Over 5,000,000 calls a year are being made by 5,000 public health nurses. Practically all of our 110,000,000 Americans are being educated to better health. About 7,000,000 school children are learning correct health habits through the Modern Health Crusade.

ONE or two new chiropractic colleges have been started in Fort Wayne, and they now are so numerous in that city that it is hard to keep track of them. The number is not exactly known as we have had no official reports during the last forty-eight hours. Incidentally, it is known that the chiropractic signs in the city of Fort Wayne far out-number the signs of all real doctors put together, but the latest accounts indicate that the real doctors are doing as much work as ever before. It is a known fact that the chiropractors are warring among themselves, and one suit by some of the students threatens to close up one of the chiropractic schools. Perhaps if they are let alone they will "hang themselves with their own rope".

CHRISTMAS seal your Christmas mail! Since 1908, when the first annual Red Cross Christmas seal sale was inaugurated, the national, state and local tuberculosis associations have been constantly reducing the death rate from tuberculosis which, at that time, was nearly 200 for every 100,000 population. Now—1921—this human loss has been reduced to approximately 125 for every 100,000 people, a saving of 75,000 lives annually. The use of Christmas seals on your mail, (1) helps provide care and treatment for those who have the disease: (2) helps prevent those who are infected with it from breaking down with active tuberculosis; (3) helps control the spread of infection from those who have it to those who do not have it. Christmas seal your Christmas mail!

THE chiropractors are getting so thick, and the "business" that goes to chiropractors has to be spread out so thin in view of the numbers of those who grab for it, that it has become necessary to make personal solicitations for work among those reported as sick or disabled from any cause. Soliciting "business" by letters, and even by telephone calls, is not at all unusual, and we have heard of one afflicted family that received several letters from as many different chiropractors asking for the privilege of making "adjustments" with a view of accomplishing a cure. The pathetic feature of this whole nauseating business is that the ignorant and the poor for the most part are the ones that are deluded and swindled, and they are the ones who can least afford it.

WE desire to call the attention of our readers to an advertisement which appeared in the November number of THE JOURNAL in which a well known pharmaceutical house say in their advertising "Prescribe Council Passed Products", meaning of course that physicians who are wise will use only those pharmaceutical specialties that have been examined and approved by the Council on Pharmacy and Chemistry of the A. M. A. That is the right kind of talk, and we are especially pleased to note that the more progressive manufacturers of pharmaceutical specialties and biological products are coming to the conclusion that not only is the Council an excellent body of clinicians and investigators whose approval is worth securing, but that the rank and file of the medical profession will be wise if the Council's findings are heeded.

THE Sheppard-Towner bill in its amended form has passed Congress and been signed by the President. Therefore it is now a law of the land. It appropriates a large sum of money, a good portion of which is devoted to administration expenses. Nothing is provided for the care or treatment of the maternity case, in reality the one that the bill was supposed to aid and protect. It was opposed by an almost united medical profession, by many women's clubs, and by many civic organizations. In the main it is a "pork barrel" measure, and the functioning which the bill provides for is placed in the hands of a committee the majority of whom are laymen. Unquestionably the bill as passed provides for a wasteful expenditure of money without adequate return, and to top the whole thing off

its operation is not placed in the hands of the Public Health Service where it belongs. Could anything be more demonstrative of what politics will do?

THE *British Medical Journal,* in launching a campaign to better the personnel of the medical profession, makes the statement that "No one should think of entering this profession who is unprepared to spend $75,000 on his medical education". Is it possible that England has not heard of chiropractic for the cure of all diseases and ailments, from cancer to chicken-pox, the science of which cult can be learned in from three to six months, at a cost not to exceed $100! Why spend $75,000! England indeed is "behind the times" if she still believes in long medical courses covering physiology, anatomy, bacteriology, histology, pathology, etc., etc., when such knowledge is entirely superfluous, and all that is necessary is a little exercise and training of the fingers to "manipulate" the vertebræ for the cure of any and all diseased conditions! Someone should advise the *British Medical Journal* of its terrible error in making such a statement!

NEVER before have doctors as well as others been importuned so much and so strongly to invest earnings in questionable enterprises ranging all the way from certificates of stock in imaginary oil wells to promotion stocks in industrial enterprises. A good rule to follow is the one promulgated by Better Business Bureaus everywhere that say "Before you invest, investigate". The best and only way to test out an investment is to measure it according to the standards of safety. Take nothing for granted. Check up or prove what the salesman tells you. Remember that safety of principal is the first consideration, and big returns are seldom secured from enterprises whose stock is peddled. Remember that the safest investments are those that return a moderate income. A safe rule to follow in case one hasn't the time to investigate thoroughly the proposition that is offered is to ask your banker *if he will recommend the buying of the stock that is offered.* Your banker may be one of the "suckers" that occasionally bite a well-baited though treacherous hook, but he seldom if ever will advise a client to do anything other than pursue a perfectly safe course.

FORT WAYNE seems to be a fertile field for the establishment of chiropractic colleges. Within the last few months several new chiropractic schools have blossomed out, the exact number not being known as we haven't received the returns during the last day or so. Already graduates of schools that have been in existence only a few weeks are flaunting their diplomas and soliciting "business" with a persistence that would do credit to a fake mining stock salesman. Incidentally these chiropractic schools are about to deprive the public of some reasonably good janitors, barbers, and even common street laborers, many of whom are looking forward to the time when they can make "easy money" through chiropractic "adjustments" the knowledge of which can be obtained in a few weeks of indifferent training. Even the elevator boy in one of the local hospitals in Fort Wayne, scarcely out of short trousers, and never having gone beyond the ward schools, proudly volunteered the information that in six weeks he would be a "chiropractic doctor", and then would not have to run an elevator. However, we predict that chiropractic, which has gone up like a sky rocket, will come down like the stick. Anything so idiotic as chiropractic is not going to last, but the trouble of it is that when chiropractic goes, something equally as idiotic and inconsistent will spring up to take its place. Thus the need of restrictive legislation to protect the people from such fakes.

The annual meeting of the Indiana Academy of Ophthalmology and Otolaryngology will be held at the Claypool Hotel, Indianapolis, January 18, 1922. Following is the program:

MORNING SESSION

9:00 A. M.

Parlor B—Claypool Hotel

1. Secretary-Treasurer's Report.
2. Committee Reports.
3. New Instruments.
4. Case Report—DR. C. J. ADAMS, Kokomo.
5. Case Report—DR. J. W. CARMACK, Indianapolis.
6. Comparative Anatomy of the Eye. Gross Pathology. Illustrated by Mounts.—DR. GEORGE F. KEIPER, Lafayette.
7. Election of Officers.

AFTERNOON SESSION

1:30 P. M.

Parlor B—Claypool Hotel

1. President's Address.
2. Lip Reading for Hard of Hearing Adults. By Invitation.—MISS GERTRUDE TORREY, Chicago.
3. Subjective and Objective Nasal Symptoms—W. A. HOLLIS, Hartford City.
4. Hereditary Sub-Luxation of the Crystalline Lens—DR. F. MCKAY RUBY, Union City.
5. Persistence of the Embryonic Fibro-Vascular Sheath of the Lens. Illustrated by Lantern Slides.—DR. E. J. LENT, South Bend.
6. Toti Mosher Operations on the Tear Sac—DR. J. F. BARNHILL, Indianapolis.

EVENING SESSION

Dinner.

Speaker—DR. HARRY POLLOCK, Chicago.
Subject: "High Spots in Otolaryngology."

A NEW YORK doctor possessing a rather unsavory ethical reputation is getting a lot of free newspaper advertising by giving out interviews concerning his removal of tonsils by the use of x-rays. Incidentally it may be mentioned that some of the most noted clinicians, whose opinions are respected by the medical profession, have tried x-ray therapy for enlarged tonsils and found the treatment disappointing and in a few instances positively harmful. There was a time when the high frequency electrical current was recommended by various enthusiasts as very valuable in the treatment of everything from appendicitis to ingrowing toenails, not omitting enlarged tonsils, and while the high frequency current no doubt is very beneficial in a limited field yet we seldom hear of it any more. X-ray therapy, and still later radium therapy, has been going through similar processes, being heralded by enthusiasts as applicable in a very large variety of diseases and abnormal conditions, but eventually may be found to have but a limited sphere of usefulness. Both radium and the x-ray are now doubted as being efficacious in anything more than a very limited number of malignant conditions, and quite recently Dr. Deaver, the well known Philadelphia surgeon, has felt called upon to say that he doubts if radium ever has produced any proven beneficial results in the cure of malignancy. However, x-ray and radium therapy will reach their proper status before long, like everything else that is tried as a curative agent, and let us hope that they will be found valuable in the treatment of some diseases or abnormal conditions even if they fail to remove tonsils.

OUR readers may know that the Walker Pharmacal Company is exploiting a proprietary preparation of secret formula called "Hymosa" as a remedy for acute and chronic rheumatism. In the circulars being sent to Indiana physicians are two testimonials, one by Dr. F. A. Sauer, Baltimore, Maryland, and we are unable to find such a name in the A. M. A. directory. That is about how most testimonials turn out when investigated.

Irrespective of the irrational and unscientific practice of prescribing proprietary remedies of secret composition we desire to call the attention of our readers to the fact that the Walker Pharmacal Company is the one that has been guilty of fraudulent claims concerning the virtues of several preparations, notably "Succus Cineraria Maritima," advertised as a remedy for absorbing various forms of cataract. This is the preparation that the government analyzed and afterwards made a report concerning it in which it was stated that the claims made for it "were false and fraudulent in that the same were applied to the article knowingly and in reckless and wanton disregard of their truth or falsity." The company entered a plea of guilty and was fined, but still they continue making similar claims to the medical profession and public. As we stated in THE JOURNAL, December, 1920, "Two things are quite evident to us: first, that the federal punishment was not sufficiently severe and should be repeated in such force that future activities will be found too expensive; second, that there are enough doctors of the credulous type who support these frauds so well that the exploiters can afford to pay a federal fine occasionally and still be ahead of the game."

As a memorial to James Whitcomb Riley nothing could be more fitting than the establishment by Indiana people of a hospital for children. The only objectionable feature in connection with the plan proposed is that covered by the provision made by the last Indiana legislature authorizing the establishment and maintenance of such a hospital providing that *all* (italics ours) of the children of the State of Indiana who need medical attention *may* (italics ours) be admitted *without cost* (italics ours) to them as rapidly as facilities will permit. The law even says that the children whose relatives are able to pay for the care at the hospital may do so, but this is not compulsory. The State is to provide funds for equipment and an annual appropriation for operation, thus assuring funds for permanent maintenance. All of the property will be owned by the State of Indiana. Already the State has provided fifty thousand dollars a year for operative expenses, but the James Whitcomb Riley Memorial Association has pledged itself to raise a million dollars for the purchase of grounds and erection of buildings. It is hoped that the feature of the law which says that all of the children of the State who need medical attention *may* be admitted without cost, etc., shall be construed in such a way that the *indigent* children shall be the only ones admitted as free patients. All others should pay according to their means, for there is no reason why the State should pauperize the community. No finer tribute to Riley could be offered than the establishment of a children's hospital, and such an institution is needed for the purpose of giving appropriate attention to the crippled and sick poor children of the State. However, there is no need of making a charitable institution, for which there is urgent need, a place where the well-to-do can go for the purpose of avoiding the payment of just fees for attention and care.

THE following excerpts from letters written after the publication in the *Woman's Home Companion* of Ernest Harold Bayne's unbiased

opinion on vivisection are sufficiently condemnatory to make the average person appreciate the dishonesty of the anti-vivisectionists, and the fallacies of their claims:

The trouble with the anti-vivisectionists is that they are not only dishonest but wilfully dishonest. They picked out one sentence from a paragraph in my address, "In the Time of Henry Jacob Bigelow," given before the Boston Surgical Society in Boston, on June 6th, and exploited it for their purposes, ignoring the fact that the impression they produced was quite contradictory to the views expressed. The truth is not in these people.—W. J. MAYO, Rochester, Minnesota.

What animal experimentation has accomplished for the benefit of mankind may be inferred from the list of diseases which are no longer the destroyers and terrors that they were: Smallpox, cholera, typhus fever, typhoid fever, puerperal fever, yellow fever, cerebro-spinal meningitis, diphtheria, hookworm disease, and malaria. All these diseases would have remained the terrible scourges they used to be, were it not for animal experimentation, and the progress in curative and preventive medicine which it has made possible.—CHARLES W. ELIOT, President Emeritus of Harvard University.

I am glad that you brought out the fact that those who are opposed to vivisection are constantly resorting to falsehood to support their case. It is a weak cause, indeed, which demands the desertion of moral principles for its presentation and defense.—C. I'. TIVNAN, S. J., President Fordham University.

Animal experimentation is of the highest importance to the welfare of the livestock industry, and thus, indirectly, as well as directly, in its relation to our knowledge of human diseases, of very great importance to the welfare of humanity. * * * In the light of my knowledge of what animal experimentation means to human welfare, I can say, without extravagance, that most terrible consequences would inevitably follow upon the general adoption throughout the world of the program of prohibition and regulation of, and interference with, animal experimentation that is advocated by the opponents of this fundamentally important means of the scientific investigation of disease.—J. R. MOHLER, Chief of Bureau of Animal Industry of the U. S. Dept. of Agriculture.

COMPULSORY Health Insurance, State Medicine, Venereal and other free clinics, and many other social uplift schemes requiring the energy and thought of the members of the medical profession are but stepping stones to socialistic medicine, which not only puts individual incentive and practice out of commission but will place the whole public under the rule of inefficiency. Perhaps we hear someone say, "Well, what is to be done?" to which we answer, in the words of the *Illinois Medical Journal*, "quit giving approval to these various cross-eyed medical uplift schemes advocated by erstwhile reformers and public welfare peddlers who usually see in their schemes some avenue for profit." Some of our medical men who have acquired wealth and social position seem to think that it is quite the proper thing to approve of these various uplift schemes in order to bask in the sunshine of the mighty, forgetting that in the security of their own economical position they are tramping upon the toes of their less fortunate brethren. In reality this "dear public" and "love of humanity" stuff is greatly overworked. The practice of medicine is a vocation, the following of which should be as much entitled to decent remuneration and consideration as any other vocation. It is as deserving of as much consideration as that of plumbing or bricklaying, but usually receives less. The difference between members of the medical profession and members of the plumbing and bricklaying crafts is that the former has no standing commercially or politically and is unable to secure any consideration in its demands for right or justice, whereas the latter through their unity of purpose and insistent demands for recognition secure what they are after and overthrow everything in opposition to it. What we need is a little more brotherly feeling for each other, and a little more consideration for our co-workers, and when we are looking out for the purely selfish interests of the members of the medical profession in adding to their welfare we also are adding to the welfare of the public, which is served by the medical profession.

THE necessity of adequate preparation and the folly of trying to present a subject extemporaneously, as applied to the average speaker, was never more forcefully demonstrated than at the postgraduate course given in connection with the recent or Philadelphia session of the Academy of Ophthalmology and Otolaryngology, when each man on the program was given a specific time for the presentation of his subject in a comprehensive manner and curtly informed that any additional time granted him would be at the expense of the next speaker. While many of the speakers had prepared their work in the form of a written address or carefully prepared notes, and due regard paid to conciseness of statement and avoidance of repetition and the addition of irrelevant subjects, a few of the speakers lamentably failed because they had not prepared themselves suitably and did not conform to the first principles of good public speaking. Iteration and reiteration, too much attention paid to inconsequential and irrelevant things, and perhaps a slow, hesitating delivery occasionally spoiled what should have been a profitable hour for the hearers. In a few instances some very instructive lantern slides or very creditable demonstrations were held until the last, only to be rushed through or omitted altogether on account of lack of time.

There are altogether too many men trying to present addresses or talk before medical societies without adequate preparation, and without any idea as to how or in what manner the subject is to be presented. The good extemporaneous speaker is an exception, and a carefully

prepared paper or address is appreciated far more than a disconnected, rambling and superficial talk, no matter how competent the speaker may be to talk upon the subject selected. Brevity—and conciseness consistent with lucidity—should be cultivated by all speakers, and no man is justified in accepting an invitation to appear before an audience unless he has made such preparation as will enable him to present his subject intelligently and concisely within the time allotted him. This means preparation in both the selection of material and the manner of presenting it. Any other course means an injustice to speaker and to audience.

"THOSE persons who are advocating the establishing of a federal department of public welfare are many of them no doubt well intentioned and sincere, yet it is a pity that efforts of this character cannot be directed toward the furtherance of plans more practicable and salutary. This country does not need a department of public welfare, such as is proposed, and its establishment would be bitterly resented as a bit of rank paternalism. This thing of attempting to direct American family life and to turn out citizens molded like ice cream flowers in the fashion designed by a lot of faddists does not fit in well with the popular conception of liberty and freedom of action. We have with us today far too many people who are endeavoring to shape the lives and govern the conduct of other people, and to establish a federal department which shall give these endeavors the sanction of the law and the power of authority is coming it entirely too strong to suit people who fled from the old world to escape just that sort of meddlesome interference, and those who having lived here all their lives have become imbued with the idea that those lives are theirs to live as they please so long as they please to live within the law. It is all very well to tell us that these benevolent friends who wish to mold us have "advanced ideas" and are loving benefactors, yet men, and women, too, for that matter, echo in their hearts the longing of the harassed and pestered British soldier who cried:

> "Take me somewhere east of Suez
> Where the best is like the worst,
> Where there ain't no Ten Commandments,
> And a man can get a thirst."

"Not an ennobling or uplifting sentiment truly, but a very natural protest against the bullying regulations of those who spend their lives seeking to better others by submitting them to Procrustean standards of reform. The truth of the matter is that the American people have been regulated enough for a while and they want to be let alone.

"There is another objection to this proposal and that is the tremendous expense involved. It proposes a payroll as long as the moral law, and would take care, at public expense, of all of the uplifters, reformers, freaks, and faddists in the whole country. This is no time to take on additional burdens in a financial way. Let us first see our way out of this dismal swamp of disastrous debt into which we were recently plunged by the forward looking gentlemen who thought so much of humanity that they forgot the people of the United States."—*Fort Wayne Daily News and Sentinel.*

IT is questionable if medical school inspection in some localities is not more harmful than beneficial. When the inspection is made by competent and well trained physicians it ought to accomplish great good. On the other hand, when it is carried out as it is in some localities in Indiana, by doctors having little medical education and training, by Red Cross or other nurses who profess to know more than they really do and often are guilty of over-officiousness in offering advice and suggestions that are irrational and not in keeping with established medical or hygienic rules, the medical inspection is very apt to lose most of its potent force for good. For the most part medical inspection in the cities is fairly good, though even there there is room for great improvement, because too much of the work is delegated to those not properly trained for the work, and we refer especially to the examinations that are entrusted to nurses and non-medical clerks or other employees connected with the Public Health Department. In the country districts medical inspection of schools is largely a farce, except in those rare instances when a real up-to-date and progressive physician is carrying on the work. In some of the counties of Indiana we know that the medical inspectors are more or less ignorant and poorly trained medical men who still believe that children in the public schools contract consumption when the school rooms are ventilated or when sleeping with the windows open, and still maintain the ignorant and untenable opinion that tonsil and adenoid tissue was put in the throats of children for a purpose, and that if there is any excess of it, it can be reduced by "absorption treatment". In Indiana there are even some nurses, presumably trained in the up-to-date methods, who are equally as lame as the doctors in possessing modern medical knowledge, and whose suggestions and advice to the parents and children of some communities are positively pernicious. All of which reminds us that this railroading of people and especially school children into beliefs promulgated by a species of socialistic medicine, is but the beginning of ill effects which will result if the plan is carried still farther and the public is asked to go to the State for its medical advice and attention. We have no criticism to offer of the

general plan of having school children inspected upon entrance to our public schools, and in a measure under the control of medical inspection at all times, so far as it pertains to limiting transmissable diseases among school children, but we do object to the practice of making a farce of medical inspection by placing it in the hands of incompetents.

DEATHS

CLARENCE P. COLBURN, M.D., died at his home in Richmond, November 17, at the age of sixty-two years. Dr. Colburn graduated from the Miami Medical College at Cincinnati in 1883.

BENJAMIN H. COOK, formerly of Indiana, died at his home in Los Angeles at the age of sixty-three years. Dr. Cook graduated from the Medical College of Indiana at Indianapolis in 1885 and was a member of the Madison County Medical Society, the Indiana State Medical Association and the American Medical Association.

H. H. MILLER, M.D., of Galveston, was instantly killed, November 21, when the automobile which he was driving was struck by a Pennsylvania train. Dr. Miller was fifty years of age. He graduated from the Louisville Medical School in 1897 and was a member of the Cass County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. G. R. COFFIN, of Monticello, has been elected mayor of that city.

THE Jasper-Newton County Society held a meeting at Mt. Ayr on October 28.

ROOSEVELT Hospital celebrated the fiftieth anniversary of its founding November 2.

DR. M. V. B. NEWCOMER, of Tipton, celebrated his eighty-fifth birthday October 30.

DR. CLAUDE LOMAX has moved to Holland, Indiana, where he is practicing medicine.

CONTRACTS have been let for the erection of the Blackford County Hospital at Hartford City.

DR. RICHARD A. POOLE has been appointed superintendent of the City Hospital in Indianapolis.

DR. CLYDE C. BITLER underwent an operation for appendicitis at the Clinic, Newcastle, October 24.

DR. IRA COLE has removed from Williamsport to Linden, where he will take over the practice of the late Dr. Mitchell.

DR. CHARLES A. BARNHILL has moved his office from the Hume-Mansur Building to Suite 536-540 in the Bankers Trust Building.

PROFESSOR STANLEY COULTER, dean of Purdue University, will head the annual Christmas seal sale in Indiana this year.

DR. FREDERICK J. FRESHLEY, of Evansville, has been found guilty by the federal court of violating the Harrison narcotic law.

DR. CLEMENS VON PIRQUET, Vienna, has arrived in New York. He will deliver the Stillman course of lectures at Yale University this winter.

A VOCATIONAL training center is to be established at the Irene Byron Hospital at Fort Wayne. Dr. John H. Rhys will have charge of the work.

DURING the year 1920 in the birth registration area of the United States, 1,508,874 births were reported and in the same area 836,154 deaths were reported.

THE Randolph County Medical Society held its meeting in the new hospital at Winchester, November 15. A paper was presented by Dr. Milliken of Ridgeville.

DRS. S. L. MCKINNEY, H. K. STORK, of Huntingburg, and J. P. Salb of Jasper, have been appointed members of the staff at St. Mary's Hospital, Evansville.

THOMAS I. CARRITHERS has donated five thousand dollars to be used in the purchase of a home suitable for nurses of the Methodist Hospital at Princeton, Indiana.

THE Steuben County Medical Society held a meeting November 25. Dr. Eric Crull of the Irene Byron Hospital, Fort Wayne, presented a paper on the "Prevention of Disease".

THE Fourth District Indiana State Nurses' Association held a meeting November 9. Mrs. C. D. Fansler, of the Methodist Hospital, Indianapolis, was elected president.

DR. O. G. BRUBAKER, for seven years a medical missionary in China, has opened an office in North Manchester for the special practice of eye, ear, nose and throat diseases.

A NEW corporation by the name of "The Clinic" has been established at 501 Pine Street, Michigan City, for the purpose of establishing and maintaining a sanitarium and hospital.

THE Tenth District Medical Society held its meeting at Gary, November 10. Papers were presented by Drs. W. A. Shackelton, Charles A. Elliott and Louis J. Pollock, all of Chicago.

THE Wabash County Medical Society held its meeting at Wabash, November 17. Dr. LaSalle presented a paper on "Tonsillectomy" and Dr. More discussed "Incipient Tuberculosis".

THE state tuberculosis hospital at Rockville, Indiana, will be enlarged in order that ex-service men afflicted with tuberculosis may receive care without leaving their home state.

THE Huntington County Medical Society held its regular meeting at Huntington, November 1. Dr. Wallace Grayston read a paper on "Intussusception". Dr. Charles H. Good led the discussion.

THE Benton County Medical Society held its meeting at the home of Dr. W. H. Taylor, November 8, and elected the following officers for 1922: President, O. M. Flack, Boswell; Secretary, J. L. Morehouse, Fowler, Indiana.

DR. B. W. HARRIS, of Uniondale, has located in Gary, Indiana, where he will engage in the practice of medicine as a member of the firm of Craig, Propper & Harris. Dr. Harris will specialize in diseases of children.

THE Hamilton County Medical Society held a meeting at the Houston Hotel, Noblesville, November 8. The principal paper of the evening was presented by Dr. Lafayette Page, of Indianapolis, whose subject was the Riley Memorial.

DR. ANDREW T. CUSTER of Indianapolis announces to the medical profession the establishment of the Custer Rectal Clinic, with offices at 618 Hume-Mansur Building. The Clinic will give medical and surgical treatment to diseases of the rectum, with special attention to the treatment of hemorrhoids and rectal cancer.

THE board of governors of the National Anesthesia Research Society will hold a world's convention of anesthetists in conjunction with their next annual meeting at Columbus, Ohio. Invitations will be sent to the leading anesthetists in London, Paris, Vienna, Buenos Aires, Sydney and other world centers of importance.

THE Ohio Valley Medical Association held its annual convention at Evansville, November 17, and the following officers were elected: President, Dr. L. W. Bremerman, Chicago; first vice-president, Dr. L. L. Solomon, Louisville; secretary-treasurer, Dr. Benjamin F. Floyd, Evansville. The next convention will be held in Evansville.

THE Third District Medical Society held its meeting October 12, at Salem. The following papers were presented: "Occipito Posterior Position in Obstetrics," by Dr. Wm. Green, of Pekin; "The Management of Chronic Valvular Diseases of the Heart," by Dr. Wm. Jenkins, of Louisville; and "The Management of Empyema," by Dr. H. B. Shacklett, of New Albany.

THE Department of Commerce announces that the Census Bureau's annual report on mortality statistics shows 1,142,578 deaths as having occurred in 1920 within the death registration area of continental United States, representing a death rate of 13.1 per 1,000 population as compared with 12.9 in 1919, which was the lowest rate recorded in any year since the registration area was established in 1900.

THE Indiana State Board of Health has instituted a new division of the Board known as the Housing Division. Tenement house surveys will be made in the large cities as rapidly as possible and the exact conditions reported. All plans and specifications made by architects for hotels, lodging houses and tenements must be submitted to the State Board of Health for approval.

DURING November the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: G. W. Carnrick Co., Amylzyme Capsules. Merck & Co., Bromipin 10 percent, Iodipin 10 percent. Tablets. Powers-Weightman-Rosengarten Co., Theobromine-P. W. R. Schering & Glatz, Xeroform-S. and G. E. R. Squibb & Sons, Diphtheria Immunity Test (Schick Test)-Squibb, Diphtheria Toxin-Antitoxin Mixture-Squibb.

DR. DAVID I. MACHT, of Johns Hopkins University, has been awarded the third annual grant from the research fund of the American Pharmaceutical Association for his researches in connection with new antispasmodics. Dr. Macht has found that the benzyl derivatives have all of the sedative effects of the opiates without the objectionable influence of opiates and without an unfavorable reaction after their use. Dr. Macht will continue the investigations of other drugs having a sedative action.

THE mid-winter meeting of the Indiana Academy of Ophthalmology and Otolaryngology will be held at the Claypool Hotel, Indianapolis, all day Wednesday, January 18, 1922. The forenoon meeting will be called at nine o'clock in Parlor B, and the program consists of case reports, new instruments, etc. The afternoon program consists of papers, and the evening includes a banquet and an address. The complete program appears under Society Proceedings in this issue of THE JOURNAL.

THE St. Joseph County Medical Society held its thirty-sixth annual meeting in South Bend, November 16. The program included "Evolution of Symptoms in Diagnosis" by Albert E. Sterne, Indianapolis; "Reflex Abdominal Disorders" by Arthur E. Elliott, Chicago; "Operations on the Gasserian Ganglion with Report of Cases" by John F. Barnhill, Indianapolis; "Conservation of the Patient" by Fredrick G. Dyes, Chicago; and in the evening Dean Stanley Coulter of Purdue University delivered an address on "The Physician and the Public".

THE following resolutions were unanimously adopted at the Mid-Western Association of Anesthetists' meeting held in Kansas City, Mo., October 25:

"WHEREAS, The middle western states are being circularized with false and misleading statements regarding the general practice of anesthesia and particularly the use of nitrous-oxid oxygen, and

"WHEREAS, The Mid-Western Association of Anesthetists is formed for the study and promotion of truth as it relates to the specialty of anesthesia in medicine, now therefore

"BE IT RESOLVED, That this society, in convention assembled, condemns the statements and the actions of Dr. J. F. Baldwin of Columbus, Ohio, in his utter disregard for truth and official records of recognized institutions as these relate to the practice of anesthesia and his efforts to discredit scientific advance by the unethical practice of disseminating false and misleading statements among medical, dental and hospital authorities throughout the United States."

INDIANA University is continuing this year the health education campaign undertaken last spring at the instance of the State Department of Public Instruction, with the primary purpose of interesting people of the state in the employment of public health nurses, and with the additional aim of reaching high school girls, women's organizations, and the general community in such a way as to encourage recognition of the importance of increasing the number of young women being trained for nursing service.

Miss Grace Pitt and Miss Mabel Loveless, registered graduate nurses from the Indiana University School for Nurses, are carrying on the field work, which will take them into practically every county in the state during the next seven months. Mrs. Ethel P. Clarke, director of the Indiana University School of Nursing, has outlined the work of the visiting nurses, while the arrangement of the itinerary is in the hands of the Indiana University Extension Division at Bloomington.

By means of conferences, demonstrations of nursing procedure, exhibits on the care of children, and moving pictures, the nurses strive to make their work of practical value to the communities visited. A program of three days is scheduled for each community, the first of which is devoted to setting up the exhibits and explaining them to individuals and groups. The morning of the second day is taken up with lectures, demonstrations and conferences with high school girls. The work of the public health nurse in the care of babies, in the examination of school children, and in nursing procedure which has special interest for the particular community visited is explained during the afternoon of the second day. The evening program consists of a lecture on community health problems. The third day is taken up with informal conferences by appointment or otherwise with girls as to the nursing profession, with mothers and teachers on the care of children, and with other persons who desire assistance. The visiting nurses carry with them four reels of motion pictures, one reel showing the instructional work given in training schools for nurses, one reel on the uses and methods of handling milk, and two reels entitled "An Equal Chance," which demonstrate the various ways in which children suffering with disease and injury may be brought to normal life.

Last spring the field nurses covered thirty-seven counties of the state, twenty-three of which had no public health nurse, and one of which had no registered graduate nurse in any branch of work. More than 8,500 high school girls attended talks on the preparation of foods and on nursing as a profession, while more than 1,700 mothers and teachers had personal interviews with the nurses on the care of children.

Among the interesting experiences which show the practical value of the health crusade was that of the nurses at Oakland City, where they found a ten-year-old daughter of foreign parents, almost blind. The child attended a lecture by the nurses and after hearing something of what could be done in cases of threatened loss of sight, ran home and brought her mother to the nurses. The interview with them developed the fact that the ignorant mother looked upon the case as entirely hopeless, but the nurses took up the matter with experts at the State School for the Blind, with good prospects for complete restoration of the child's sight.

Among the humorous incidents of their crusade last year, the nurses tell the story of a small boy at Anderson who, after hearing a health talk for children, called up Mrs. Ella Bagot Kehrer, prominent state charity worker, who was serving as chairman of the meetings, and asked her if his ears belonged to his face or to his neck. He explained that he hoped they belonged to his neck, for if they belonged to his face he would have to wash them three times a day instead of once a day if they belonged to his neck.

Last year the visiting nurses found twenty counties calling for public health nurses, without being able to obtain them, and in Ohio county, the smallest in the state, a fund of $1,500 had been placed in the bank to be used for the services of a public health nurse as soon as one could be found.

The nurses carry with them literature on the proposed new Riley Memorial Hospital for Children at Indianapolis and are calling attention to the fact that the hospital, with its heavy staff of nurses, will materially increase the demand for nurses in this state. More than 10,000 children of Indiana are estimated to be in need of hospital attention and this fact is emphasized by the field workers in Indiana's newest health crusade.

CORRESPONDENCE

CONCERNING TARIFF ON CHEMICALS

Indianapolis, Indian., Nov. 15, 1921.

EDITOR JOURNAL INDIANA STATE MEDICAL ASSOCIATION:

Dr. J. N. Hurty recently delivered an address on "The Organic Chemical Industry" at a meeting of about 100 persons in Indianapolis under the auspices of the Indianapolis Branch, American Pharmaceutical Association. Following this address and more than an hour's discussion, the meeting unanimously adopted a resolution asking Indiana's Congressmen and Senators to vote for a continuance of the present embargo on the importation of organic chemicals—medicinal, dye, photographic, etc.

A year or two ago the discussion about an embargo on organic chemicals centered around dyes. As this subject has received consideration it has been shown to extend far beyond this one class of organic chemicals: medicinal chemicals are just as seriously concerned as are artificial dyestuffs.

For example, salicylic acid and its compounds and derivatives, such as acetylsalicylic acid, salol, sodium salicylate, etc., are the most largely used group of medicinal chemicals. So closely are these items allied with artificial dyestuffs that the primary market prices on salicylic acid are given under the classification "Dyestuffs, etc.," in trade reports such as are published weekly in the *Oil Paint and Drug Reporter*. Purified medicinal supplies are not primarily produced as articles of medicines but are drawn from acid produced primarily as an intermediate for artificial dyestuffs. The market price for medicinal supplies is very closely tied to the dyestuffs market.

In a practical way there has been an embargo due to the war for more than four years. In quantities of several hundred pounds on yearly contracts the primary market price on sodium salicylate has been approximately as follows:

1909,	36c	1914,	60c	1915,	$2.05	1916,	$2.30
1917,	87c	1918,	92c	1919,	.50	1920,	.60
1921,	28c						

Practically the embargo is still in operation and this reduction does not give any reason to the consumer to fear that a continuance of the embargo will create a monopoly that will overcharge for its products. This reduction during the past year has been passed along to the purchaser of medicinal preparations of salicylates.

Other medicinal substances closely bound to dyestuffs and like salicylic acid quoted in the dyestuff market report are phenol, cresol, resorcin, acetanilid, phenacetin, all the benzyl derivatives and a host of other important but less largely used articles.

Many chemicals produced originally only as dyes have become valuable as therapeutically active substances. Members of the fluorescin, rosaniline, eosine, and flavine groups have such dual importance. The stains used in bacteriology and in tissue work were first produced commercially as dyes.

Physicians have ample reason to concern themselves with the organic chemical industry and the support which we give it as a nation.

This support can with certainty take no other form than an embargo. Even the enemies of an American organic chemical industry are willing to concede that it should have whatever protection may come from a tariff. But a tariff however high is deceptive. Highly purified naphthaline under present custom regulations is covered by an almost prohibitive tariff, but naphthaline of a lower melting point and hence assumed to be less pure is almost free from tariff. Highly purified naphthaline sprayed with water (a small percentage only) takes on a lower melting point and hence evades the tariff. Such uncertainties as this destroy the usefulness of any protective tariff schedule.

Only an embargo for not less than five years to come will bring to America the certainty of an organic chemical industry suitable for her needs. Each member of the medical profession in Indiana may well declare himself on this subject to his Congressmen and Senators in Washington.

Yours truly,

A. D. THORBURN.

SOCIETY PROCEEDINGS

110 PERCENT CLUB

No.	County	Secretary	1920	1921
1.	St. Joseph	R. B. Dugdale	75	87
2.	Franklin	E. M. Glaser	8	10
3.	Adams	L. E. Somers	11	14
4.	Carroll	Eva N. Kennedy	20	24
5.	Hendricks	W. T. Lawson	16	19
6.	Kosciusko	W. B. Siders	26	32
7.	Lawrence	F. S. Hunter	21	26
8.	White	H. B. Gable	10	11
9.	Jasper-Newton	O. E. Glick	24	27
10.	Orange	J. I. Maris	16	19
11.	Owen	Allen Pierson	9	11
12.	Wabash	Earl J. Cripe	26	30
13.	Pike	S. R. Clark	12	13
14.	DeKalb	M. E. Klingler	20	27
15.	Washington	Irvin Huckleberry	5	13
16.	Clark	Austin Funk	2	17
17.	Clay	H. L. Hirt	17	19
18.	Allen	Miles F. Porter, Jr.	95	105
19.	Greene	W. R. Cravens	16	18
20.	Henry	C. E. Canaday	25	29
21.	Switzerland	R. M. Copeland	7	8
22.	Fulton	A. E. Stinson	15	17
23.	Jay	C. A. Paddock	18	30
24.	Lake	E. E. Evans	84	95
25.	Marshall	T. C. Eley	20	22
26.	Morgan	C. G. Bothwell	11	13
27.	Vanderburgh	Pierce McKenzie	72	82

INDIANA STATE MEDICAL ASSOCIATION
Membership List—1921

ADAMS COUNTY

683 Beavers, S. D. ..... Decatur
685 Boyers, J. S. ..... Decatur
2398 Costello, H. F., 215 N. Third St. ..... Decatur
686 Grandstaff, J. C. ..... Preble
678 Franz, E. E. ..... Berne
679 Hinchman, C. P. ..... Geneva
681 Miller, J. M. ..... Decatur
684 Parrish, M. F. ..... Monroe
675 Price, C. R. ..... Geneva
676 Rayl, C. C. ..... Decatur
677 Reusser, A. ..... Berne
680 Smith, W. E. ..... Decatur
682 Somers, L. E. ..... Monroe
2399 Vizard, J. W. ..... Pleasant Mills

ALLEN COUNTY

2004 Adams, J. R., 101 Brackenridge St. ..... Fort Wayne
2341 Beall, C. G., Lutheran Hospital ..... Fort Wayne
2506 Berghoff, R. J., 315-17 Central Bldg. ..... Fort Wayne
2019 Barnett, C. E., 301 Med. Arts Bldg. ..... Fort Wayne
2003 Benninghoff, D. R., 1241 E. Lewis ..... Fort Wayne
2587 Bickel, J. E., 506 E. DeWald ..... Fort Wayne
2014 Blosser, H. V., 309 W. Main ..... Fort Wayne
2023 Bolman, R. M., 1421 Wells St. ..... Fort Wayne
2015 Bowers, G. B. M., 328 E. Berry ..... Fort Wayne
2512 Bowers, J. W., 421 Shoaff Bldg. ..... Fort Wayne
2005 Bruggeman, H. O., 1020 Harrison St. ..... Fort Wayne
2007 Buckner, D. ..... Fort Wayne
1958 Bulson, A. E., Jr., 406 W. Berry St. ..... Fort Wayne
2208 Bulson, E. L., 406 W. Berry St. ..... Fort Wayne
1997 Calvin, W. D., 312 W. Wayne St. ..... Fort Wayne
1990 Carey, W. W., Lutheran Hospital ..... Fort Wayne
2017 Cartwright, E. L., General Elec. Co. ..... Fort Wayne
1972 Catlett, M. B., 404 Central Bldg. ..... Fort Wayne
2009 Crull, E. A., 406-8 Peoples Tr. Bldg. ..... Fort Wayne
2211 Culp, L. L., Indian Agency ..... Washington, D. C.
1987 Dancer, C. R., 218 W. Washington ..... Fort Wayne
1991 DeVaux, E. F., Wayne Trace ..... Fort Wayne
1992 Dinnen, J. F., 227 W. Wayne St. ..... Fort Wayne
2206 Ditton, I. W., 216 Central Bldg. ..... Fort Wayne
1971 Drayer, L. F., Berry and Webster ..... Fort Wayne
1966 Duemling, H. A., 301 W. Creighton ..... Fort Wayne
1964 Dupre, B. G., 2927 Hoagland Ave. ..... Fort Wayne
1999 Eberly, Karl, 314 Med. Arts Bldg. ..... Fort Wayne
1981 Edlavitch, B. M., 1230 W. Wash. ..... Fort Wayne
1973 Enslen, Wm., 200-03 Med. Arts Bldg. ..... Fort Wayne
2519 English, C. H., 2509 Webster St. ..... Fort Wayne
2509 Gilpin, J. H., 234 Utility Bldg. ..... Fort Wayne
1960 Glock, Homer E., 404-5 Noll Bldg. ..... Fort Wayne
1962 Grandy, C. C., Lutheran Hospital ..... Fort Wayne
1978 Grant, Margaret ..... Fort Wayne
1989 Gross, Wm. O., 415 E. Washington, Fort Wayne
2515 Hamilton, Allen, 337 W. Wayne St. ..... Fort Wayne
2513 Hanaway, N. J. ..... Fort Wayne
2511 Harshman, L. P. ..... Fort Wayne
1993 Havice, S. H., 130 W. Wayne St. ..... Fort Wayne
2517 Henderson, S. T., 224-6 Med. Arts. ..... Fort Wayne
2538 Hoffman, S. P., 418 Rose Lane ..... Fort Wayne
2205 Hosford, J. H., 1302 Calhoun St. ..... Fort Wayne
2006 Huffines, T. R., Barr and Wash'ton. ..... Fort Wayne
2005 Johnston, D. D., 624 Calhoun St. ..... Fort Wayne
1979 Kaadt, C. F., 339 Brackenridge St. ..... Fort Wayne
2330 Kane, A. L. S., 235 W. Wayne St. ..... Fort Wayne
2001 *Kesler, A. J., 1901 Lafayette St. ..... Fort Wayne
2342 Kruse, E. H., 316-18 Central Bldg. ..... Fort Wayne
2334 Lill, J. C., 2102 Hanna St. ..... Fort Wayne
1994 Lohman, M. R., 336 W. Berry St. ..... Fort Wayne
2021 Macbeth, A. H., 415 E. Wayne St. ..... Fort Wayne
2018 Macbeth, B. G., 415 E. Wayne St. ..... Fort Wayne
2022 Macbeth, Harriet S., 329 E. Berry ..... Fort Wayne
2510 McArdle, J. E., Webster and Berry ..... Fort Wayne
1967 McBride, W. O., 328 Medical Arts ..... Fort Wayne
2586 McCaskey, G. W., 409 W. Main St. ..... Fort Wayne
2333 McHugh, J. E., E. Creighton Ave. ..... Fort Wayne
2012 McKeeman, R. B., 2020 Broadway ..... Fort Wayne
1998 Mendenhall, E. N., 231 Med. Arts ..... Fort Wayne
2339 Mentzer, S. E. ..... Monroeville
1970 Metcalf, D. D., 1333 Calhoun St. ..... Fort Wayne
2016 Minnick, H. R. ..... Grabill
2539 Mikesell, A. L., 214 E. Washington ..... Fort Wayne
1996 Morgan, E. E. ..... Fort Wayne
2011 Morgan, J. D. ..... Dixon, Ohio
2507 Morris, E. E. ..... New Haven
1968 Morris, I. E., 1941 Calhoun St. ..... Fort Wayne
2020 Moser, D. E. ..... Woodburn
1982 Neumeyer, Wm., 116 E. Suttenfield ..... Fort Wayne
2337 Nieschang, C. C. F., 1118 Calhoun, Fort Wayne
2336 Phillips, A. F. ..... Fort Wayne
1974 Porter, M. F., Carroll Bldg. ..... Fort Wayne
1975 Porter, M. F., Jr., Carroll Bldg. ..... Fort Wayne
2514 Pulliam, J. M., 1822 E. Wayne St. ..... Fort Wayne
2518 Ranke, J. W. H., 217 W. Wash. ..... Fort Wayne
1965 Rawles, L. T., 210 Medical Arts. ..... Fort Wayne
1985 Ray, H. A., 310 Medical Arts Bldg. ..... Fort Wayne
2332 Rhamy, B. W., W. Berry St. ..... Fort Wayne
2505 Rice, W. B., 1101 E. Pontiac St. ..... Fort Wayne
1969 Rodriguez, J. ..... Fort Wayne
1995 Rosenthal, M. I., 336 W. Berry St. ..... Fort Wayne
2209 Rothschild, C. J., 338-43 Utility ..... Fort Wayne
2508 Royer, Don J. ..... Fort Wayne
2008 Schick, M. F., 116 W. Berry St. ..... Fort Wayne
2516 Schlegel, E. H., 1129 Maumee Ave. ..... Fort Wayne
1977 Schneider, A. L., 702 E. Lewis St. ..... Fort Wayne
2000 Senseny, H. M., 319 Medical Arts. ..... Fort Wayne
2010 Singer, E. C., 1801 Lafayette St. ..... Fort Wayne
2203 Sledd, S. D., 213-14 Noll Bldg. ..... Fort Wayne
2204 Smith, E. D., 133 W. Columbia St. ..... Fort Wayne
2002 Squires, J. W., 302 Shoaff Bldg. ..... Fort Wayne
2210 Steinman, H. E. ..... Monroeville
1961 Swanson, John, 1941 Fairfield Ave. ..... Fort Wayne
2013 Stoler, Albert, 412-13 Noll Bldg. ..... Fort Wayne
1980 Titus, Philip, 311 Central Bldg. ..... Fort Wayne
1982 Truelove, A. O., 219 W. Wayne St. ..... Fort Wayne
2340 Underwood, E. H., 2901 Broadway ..... Fort Wayne
1986 Van Buskirk, E. M., 11-12 Lau Blk. ..... Fort Wayne
1988 Van Sweringen, Budd, 208 W. Wash. ..... Fort Wayne
1963 Van Sweringen, Garrette, 633 W. Wayne St. ..... Fort Wayne
1959 Wallace, J. C., 302-303 People's Tr. ..... Fort Wayne
1976 Weaver, B. P., Carroll Bldg. ..... Fort Wayne
1984 Wheelock, K. K., 1020 Harrison St. ..... Fort Wayne
2338 Whitten, K. M., 343 W. Wayne St., Fort Wayne
2331 Willett, I. H., 22 White Apts. ..... Fort Wayne
2207 Zehr, Noah, 406-7 Noll Bldg. ..... Fort Wayne

BARTHOLOMEW COUNTY

592 Benham, J. W. ..... Columbus
590 Breitenbach, O. C. ..... Columbus
2412 Butler, Wm. H. ..... Columbus
596 Carmichael, W. T. ..... Columbus
601 Clouse, B. A. ..... Columbus
2137 Cosby, G. O. ..... Elizabethtown
2413 Dudding, Benj. F. ..... Hope
598 DeLong, O. A. ..... Azalia
2604 Jackson, C. M. ..... Elizabethtown
589 Kamman, H. H. ..... Columbus
600 Kirkpatrick, A. M. ..... Columbus
591 Marshall, D. J. ..... Columbus
588 McCoy, Geo. T. ..... Columbus
593 Norton, F. D. ..... Columbus
599 Norton, T. J. ..... Grammer
2135 Norton, William ..... Hope
597 Overshiner, Lyman ..... Columbus
2136 Reed, L. D. ..... Hope
2138 Reggenas, E. G. ..... Hope
2139 Roope, Alfred P. ..... Columbus
602 Suverkrup, L. R. A. ..... Columbus
595 Tilton, R. M. ..... Columbus
594 Wood, E. U. C. ..... Columbus

BENTON COUNTY

727 Atkinson, C. W. ..... Boswell
230 Bloom, H. G. ..... Oxford
226 Bundy, C. T. ..... Earl Park
1535 Clayton, Geo. R., 610 Lafayette Bldg., Lafayette
220 Flack, O. M. ..... Boswell
224 Hubbard, H. H. ..... Boswell
228 Lee, R. E. ..... Oxford
728 LeSage, Arthur ..... Fowler
227 MacGillivary, D. D. ..... Pine Village
222 Mavity, L. E. ..... Fowler

*Deceased.

1382 McCabe, J. E. ... Otterbein
223 Moorhouse, J. L. ... Fowler
225 Parker, E. E. ... Oxford
229 Smith, Ward A. ... Otterbein
221 Taylor, W. H. ... Ambia

BOONE COUNTY

1906 Ball, James R. ... Lebanon
2282 Bassett, Clancy ... Thorntown
1909 Beck, H. A. ... Lebanon
2550 Bennett, Edwin M. ... Albuquerque, N. M.
1914 Black, James H. ... Lebanon
1912 Filiatreau, Raymond N. ... R. F. D., Lebanon
1908 Higgins, O. C. ... Lebanon
1913 Little, P. B. ... Whitestown
1905 Masters, Luella M. ... Thorntown
1915 Pollom, M. R. ... Thorntown
1916 Rainey, E. A. ... Lebanon
2419 Schultz, Guy A., Nat'l Mil. Home ... Danville, Ill.
1907 Smith, DeLaskie ... Lebanon
1911 VanNuys, Mary ... Lebanon
2281 Williams, W. H. ... Lebanon
1910 Williamson, A. A. ... Lebanon

CARROLL COUNTY

1823 Brubaker, E. H. ... Flora
1836 *Callane, Marshall D. ... Flora
1825 Carney, C. E. ... Delphi
1835 Carney, John R. ... Delphi
1837 Carter, Emerson ... Bringhurst
2323 Clauser, A. C. ... Delphi
1831 Conway, P. W. ... Delphi
1830 Cooper, T. L. ... R. F. D., Camden
1824 Crampton, Chas. C. ... Delphi
1819 Davis, H. G. ... Burlington
1821 Kearns, Thomas A. ... Flora
1827 Kennedy, Chas. M. ... Camden
1828 Kennedy, Eva N. ... Camden
1829 Miller, E. B. ... R. F. D., Flora
1834 Mullin, H. Y. ... Rockfield
1838 Peters, Edward L. ... Flora
1839 Peters, Thomas D. ... Flora
1832 Quick, Wm. R. ... Delphi
1826 Robinson, F. H. ... Delphi
1820 Schultz, Judson J. ... Delphi
2526 Spears, A. H. ... Yeoman
1840 Trobaugh, W. A. ... Cutler
1822 Wagoner, E. D. ... Burrows
1833 Wray, B. Frank ... Camden

CASS COUNTY

663 Ballard, C. A. ... Logansport
649 Barnfield, J. H. ... Logansport
646 Bradfield, J. C. ... Logansport
2414 Busjahn, F. A. ... Logansport
652 Cady, N. W. ... Logansport
638 Carpenter, C. D. ... Walton
1359 Cornell, J. Frank ... Galveston
1358 Davis, John C. ... Logansport
657 Egan, B. W. ... Logansport
2268 Flanagan, E. P. ... Walton
667 Graves, A. E. ... New Waverly
640 Gilbert, J. L. ... Logansport
2066 Hatfield, James A. ... Walton
644 Hermann, F. J. ... Logansport
2063 Hickman, C. C. ... Logansport
661 Holloway, W. A. ... Logansport
639 Holmes, W. W. ... Logansport
654 Ivey, D. R. ... Royal Center
647 Johnson, H. C. ... Logansport
645 Jones, S. E., 716 W. Wabash St., Crawfordsville
655 Kistler, F. M. ... Royal Center
2141 Leisher, Chas. A., 5113 Euclid, Cleveland, Ohio
650 Little, J. A. ... Logansport
1355 *Lybrook, David E.* ... *Young America*
666 McCully, C. H. ... Logansport
665 Miller, G. D. ... Logansport
656 Miller, H. H. ... Galveston
653 Miller, L. C. ... Twelve Mile
2064 Nelson, James V. ... Logansport
662 Palmer, A. L. ... Logansport
660 Palmer, Cora B. ... Logansport
659 Palmer, Earl ... Logansport
643 Quick, L. L. ... New Waverly
641 Reed, J. H. ... Logansport
2487 Roberts, Wm. J. ... Logansport
642 Rubsan, Joseph ... Logansport
1356 Schultz, Harry M. ... Logansport
2065 Spohn, E. A. ... Walton
664 Stanton, J. J. ... Logansport
648 Stewart, J. W. ... Logansport
658 Terflinger, F. W. ... Logansport
651 Thomas, C. L. ... Logansport
1357 Troutman, R. E. ... Logansport

CLARK COUNTY

2460 Buckley, E. P., Switow Bldg. ... Jeffersonville
2464 Cohen, David, 218 Spring St. ... Jeffersonville
2458 Courtner, S. G. ... Otisco
2456 Elrod, S. B. ... Henryville
2462 Field, David L., 421 Spring St. ... Jeffersonville
2466 Funk, Austin, 404 Spring St. ... Jeffersonville

*Deceased.

2555 Graham, Oliver P. ... Jeffersonville
2453 Hancock, C. F. C. ... Jeffersonville
2580 Hancock, James D. ... Jeffersonville
2457 Hauss, Robert B. ... Sellersburg
2463 Marshall, T. J. ... Charleston
2459 Mead, Arthur R., 437 Spring St. ... Jeffersonville
2455 Mowrer, G. E., Speith Bldg. ... Jeffersonville
2396 Peyton, David C. ... Jeffersonville
2461 Pinkerton, W. J., U. S. Veterans' Bur., Valparaiso
2468 Reeder, H. H., 408 Spring St. ... Jeffersonville
2465 Ruddell, I. N., 345 Spring St. ... Jeffersonville
2454 Smith, T. M. ... Marysville
2467 Varble, Marshall, Best Bldg. ... Jeffersonville
2504 Wells, Francis M. ... Jeffersonville

CLAY COUNTY

1764 Boyer, George C. ... Brazil
1765 Brown, Archie S. ... Clay City
1758 Dilley, Fred C. ... Brazil
1756 Elliott, Harry ... Brazil
1769 Finch, Gilbert R. ... Center Point
1762 Finley, Geo. W. ... Brazil
2486 Freed, Martin A. ... Clay City
1761 Hirt, Luther S. ... Brazil
1770 Lambert, J. ... Brazil
1755 Muncie, Henry L. ... R. R. 2, Brazil
1763 Nussell, Fredrick ... Brazil
1760 Palm, William ... Harmony
1767 Pell, Geo. M. ... Carbon
1757 Pell, Harry M. ... Brazil
2050 Rawley, Jas. A. ... Brazil
2051 Rentschler, Lewis C. ... Clay City
1768 Smith, Jacob E. ... Brazil
1759 Sourwine, C. C. ... Brazil
1766 Veach, P. H. ... Staunton

CLINTON COUNTY

76 AuBuchon, F. P. ... Michigantown
2086 Bergen, E. D. ... Frankfort
82 Boulden, M. F. ... Frankfort
2085 Bowers, Harvey C. ... Akron
87 Chittick, A. G. ... Frankfort
89 Chittick, Charles ... Frankfort
88 Clark, N. W. ... Rossville
251 Compton, C. B. ... Michigantown
535 Cripe, D. E. ... Hillisburg
77 Hadley, J. W. ... Frankfort
1743 Hamilton, Alexander ... Frankfort
83 Harding, L. L. ... Frankfort
1443 Johnson, John M. ... Frankfort
253 Kent, J. A. ... Mulberry
252 McCarty, M. T. ... Frankfort
80 Mount, W. C. ... Kirklin
85 Oliphant, H. N. ... Frankfort
2126 Parker, A. P. ... Kirklin
1301 Price, J. D. ... Rossville
78 Robison, C. A. ... Frankfort
79 Robison, J. E. ... R. R. 2, Frankfort
84 Royster, H. R. ... Frankfort
86 Simms, S. B. ... Frankfort
1302 Suhre, E. F. ... Forest
1303 Thorpe, F. N. ... Boyleston
81 Van Kirk, J. A. ... Frankfort
254 White, B. O. ... Sedalia
2225 Wisehart, W. H. ... Colfax
1744 Zinn, Chas. A. ... Frankfort

CRAWFORD COUNTY

2037 Myers, J. ... Alton
2395 Wedding, M. F. ... Leavenworth

DAVIESS COUNTY

232 Anderson, J. W. ... Oden
239 Boner, G. W. ... Washington
238 Bowman, Ira E. ... Oden
235 Burress, B. O. ... Alfordsville
244 DeMotte, Jerome ... Oden
236 *Donaldson, A. I. ... Washington
2589 Hart, Douglas ... Montgomery
247 Herr, H. ... Washington
240 Hollingsworth, E. ... Washington
234 Lett, O. E. ... Montgomery
249 McPherson, S. L. ... Washington
245 McKittrick, W. O. ... Plainsville
241 Porter, M. G. ... Elnora
248 Rang, Arthur A. ... Washington
2033 Rankin, T. B. ... Scottland
233 Scudder, C. P. ... Washington
243 Smoot, D. B. ... Washington
246 Spink, T. F. ... Washington
242 Wadsworth, H. C. ... Washington
250 Willeford, Geo. W., 454 W. 29th St., Indianapolis
237 Yenne, C. H. ... Washington

DEARBORN-OHIO COUNTIES

842 Batman, E. D. ... Lawrenceburg
821 Bond, M. L. ... Aurora
840 Cowen, L. C. ... Rising Sun
822 Duncan, W. T. ... Aurora
839 Dwyer, H. H. ... Lawrenceburg
820 Elfers, John ... Rising Sun
823 Elliott, J. C. ... Guilford

843 Emmert, E. J. Lawrenceburg
824 Fagaly, A. T. Lawrenceburg
845 Fletcher, C. F. Sunman
825 Hansell, Geo. H. Rising Sun
826 Holmes, E. S. Aurora
841 Housmyer, C. C. Dillsboro
831 Jackson, J. M. Aurora
844 Johnston, D. E. Moores Hill
827 Libbert, E. J. Aurora
828 Long, H. P. Dillsboro
846 Marshall, C. C. Aurora
832 Mueller, F. M. Lawrenceburg
838 Newforth, C. Sunman
837 Robinson, W. Sunman
829 Sale, F. H. Dillsboro
836 Smith, G. F. Lawrenceburg
2479 Stevenson, Geo. A. Rising Sun
830 Stewart, O. H. Aurora
833 Sutton, H. H. Aurora
834 Treon, J. F. Aurora
835 Wallace, E. R. Aurora

DECATUR COUNTY

285 Bentle, P. C. Greensburg
287 Bird, E. R. Greensburg
277 Clark, P. E. Clarksburg
282 Douglas, D. E. Greensburg
281 Evans, J. M. Greensburg
280 Glass, J. G. Greensburg
292 Kercheval, C. F. Greensburg
289 McKee, H. S. Newpoint
286 Sanders, I. M. Greensburg
278 Thomas, W. E. Greensburg
276 Tindall, P. R. Shelbyville
288 Tremain, M. A. Adams
291 Turner, W. R. St. Paul
279 Weaver, D. W. Greensburg
290 Welch, J. A. Letts
283 Welch, O. F. Westport
275 White, B. S. Greensburg
284 Wood, Charles Westport

DEKALB COUNTY

2070 Baxter, J. C. Auburn
689 Bevier, Frank Waterloo
2498 Brunson, V. C. Butler
2441 Clarke, Charles R. Auburn
186 Fanning, Frank D. Butler
187 Farnham, H. R., 513 E. Broadway, South Bend
2469 Fretz, John C. Waterloo
531 Geisinger, L. N. Auburn
185 Harrison, Lynn H. Butler
193 Hines, A. V. Auburn
194 Hines, D. M. Auburn
192 Hines, F. M. Auburn
2372 Howard, C. E. Garrett
2322 Ish, Ethan A. Waterloo
2371 King, Frank A. Garrett
191 Klingler, M. E. Garrett
2411 Nusbaum, Wm. H., 605 Occidental, Indianapolis
2072 Reynolds, D. M. Garrett
2073 Sanders, J. A. Garrett
2374 Schurtz, Espy K., Nat'l San., Johnson City, Tenn.
2071 Showalter, J. E. Waterloo
184 Shumaker, Wm. F. Butler
690 Souder, U. S. Auburn
190 Stewart, C. S. Auburn
189 Swarts, W. W. Auburn
2370 Syman, W. G. Garrett
188 Thomson, J. W. Garrett

DELAWARE-BLACKFORD COUNTIES

1894 Ames, Geo. F. Eaton
1889 Andrews, Geo. R. Muncie
2147 Atkinson, James M. Eaton
1900 Ball, Clay A. Muncie
33 Ball, Lucius L., West. Res. Life Bldg., Muncie
2151 Barnard, P. C. Parker
41 Beeson, Roscoe H., West. Res. Life Bldg., Muncie
564 Bell, J. N. R. R. 6, Muncie
2386 Berry, Noah D. Muncie
1901 Bock, C. L. Muncie
2383 Boram, E. V. Oakville
38 Bowles, Herman S., 310 E. Washington, Muncie
1885 Brown, Karl T. Muncie
2144 Buckles, H. L. Hartford City
95 Bucklin, G. W., 525 E. Main St. Muncie
2557 Bunch, F. L. Muncie
49 Cecil, A. A., 1022 Kirby Ave. Muncie
46 Clauser, E. H. Muncie
1893 Cole, Russell E. Muncie
2548 Corey, C. W. Hartford City
28 Cowing, Hugh A., 210 S. High St. Muncie
1890 Dando, Geo. H. Montpelier
45 DeWees, Roy E. Hartford City
32 Downing, J. Frank, 118 S. Franklin St. Muncie
1902 Dunn, F. Wm. Muncie
1888 Esch, G. H. Muncie
3 Fair, Herbert D., 103 West. Res. Life, Muncie
562 Fisher, E. S. Carter, Montana
37 Glascock, Fred L., 214 E. Adams St., Muncie
44 Gordon, Virgil Blountsville
1 Green, E. S., 102 West. Res. Life Bldg., Muncie
1895 Harrold, John R. Roll
1891 Hill, Frank E. Muncie
2145 Hollis, Ella Hartford City
40 Hollis, Wm. A. Hartford City
98 Jackson, Frank G., 216 E. Adams St. Muncie
50 Jump, Chas. A. Selma
1892 Jump, S. G. Muncie
2149 Kemper, Arthur T. Muncie
1896 Kirklin, Byrl R. Muncie
561 Kirkpatrick, J. C. Roll
215 Kirshman, Chas. J. Albany
2150 Leatherman, Cameron A. Muncie
30 Mann, Eli B., Wysor Block Muncie
213 Mansfield, Thomas J. Muncie
2547 McMorries, John H. Muncie
29 Miller, Chas. E., 315 S. Jefferson St. Muncie
34 Mills, Cassius C., West. Res. Life Bldg., Muncie
97 Mix, C. Melvin, West. Res. Life Bldg., Muncie
39 Molloy, Wm. J., Neely Block Muncie
36 Moore, W. C., West. Res. Life Bldg. Muncie
1897 Morrow, B. B. Muncie
563 Owens, Thomas R., 220 W. Jackson St., Muncie
48 Payton, Lewis, 223 N. High St. Muncie
2148 Poland, U. G. Muncie
35 Quick, James M. Muncie
1899 Quick, John C., 114 Howard St. Muncie
2549 Power, U. G. Albany
2 Rea, Clarence G., 6 Roberts Block Muncie
1886 Sellers, Chas. A. Hartford City
2588 Sexauer, Chas. F. Newcastle
2146 Shadday, Elmer D. Montpelier
1898 Sperry, H. E., 401 Lewiston, Rochester, N. Y.
2382 Spickerman, Harry R. Muncie
42 Spurgeon, Orville E., 215 E. Jackson St., Muncie
426 Spurgeon, Wm. A. Muncie
1887 Stephens, Walter C. Muncie
96 Taylor, James A. Montpelier
214 Tindal, Edward F. Muncie
31 Trent, I. N., 108 E. Jackson St Muncie
1903 Vanderburg, James M. Albany
47 Wadsworth, W. W. Muncie
43 Werry, Leslie E. Hartford City
2384 Williams, John H. Cowan
2385 Wright, C. H. Yorktown

DUBOIS COUNTY

2377 Bigham, O. A. Batesville
628 Bretz, W. D. Huntingburg
730 Elfert, E. E. Hayesville
729 Gugsell, A. F. Ferdinand
637 Johnson, L. B. W. Ireland
636 Knapp, H. C. Huntingburg
632 Lukemeyer, E. G. Huntingburg
633 Lukemeyer, L. C. Huntingburg
634 McKinney, S. L. Huntingburg
1371 Rust, Wm. F. Holland
630 Salb, J. P. Jasper
631 Salb, Leo A. Jasper
627 Schwartz, C. W. Huntingburg
635 Steinkamp, E. F. Huntingburg
1523 Stork, Harvey K. Huntingburg
629 Sturm, E. A. Huntingburg

ELKHART COUNTY

1690 Amick, Chas. L. Wakarusa
1663 Ash, Elmer E. Goshen
1691 Barwick, Samuel O. Elkhart
1664 Becknell, I. J. Goshen
1692 Benham, Frank A. Elkhart
1686 Brumbaugh, Melvin T. Foraker
1723 Carnally, J. H. Elkhart
1689 DeFrees, H. J. Nappanee
1693 Dewey, Fred N. Elkhart
1665 Drees, C. L. Goshen
1670 Eby, Henry W. Goshen
1678 Eby, Ida L. Goshen
1694 Eckleman, M. M. Elkhart
1685 Eicher, Floyd I. Wakarusa
1695 Elliott, L. A. Elkhart
1680 Farver, M. A. Middlebury
1697 Fleming, Claude F., 6148 Greenview, Chicago, Ill.
1696 Fleming, John C. Elkhart
1666 Freeman, F. M. Goshen
1698 Frink, Chas. W. Elkhart
1699 Grossnickle, Geo. W. Elkhart
1681 Harper, W. Q. Millersburg
1700 Haywood, Chas. W. Elkhart
1704 Hoover, E. M. Elkhart
1702 Hoppingarner, Geo. B. Elkhart
1701 Holdeman, E. Elkhart
1667 Hollingsworth, Allen S. Goshen
2343 Inks, Chas. A. Nappanee
1682 Irwin, Albert J. Goshen
1703 Kistner, John W. Elkhart
1668 Kreider, M. K. Goshen
1669 Kreider, W. B. Goshen
1705 Kuhn, B. F. Elkhart
1672 Lemon, Herbert K. Goshen

1706 Lockwood, Reuben L.....Elkhart
1708 Markel, Ivan J.....Elkhart
1709 Mast, Jacob C.....Elkhart
1707 McKee, Horace N.....Elkhart
1671 Miller, D. L.....Goshen
1710 Miller, S. T.....Elkhart
1711 Murphy, Robert M.....Elkhart
1712 Norris, Allen A.....Elkhart
1675 Page, Wm. B.....Goshen
1713 Porter, Jesse B.....Elkhart
1687 Price, Melvin D.....Nappanee
1688 Price, Willard A.....Nappanee
1714 Randolph, Frank.....Elkhart
1679 Slabaugh, J. S.....Nappanee
1715 Short, I. W.....Elkhart
1674 Simmons, L. H.....Goshen
1673 Snapp, James A.....Goshen
1716 Spohn, Geo. W.....Elkhart
1717 Stauffer, Walter A.....Elkhart
1718 Staufft, H. O.....Elkhart
1683 Teters, B. F.....Middlebury
1684 Teters, Melvin.....Middlebury
1719 Todd, David D.....Elkhart
1676 Vanderbogart, H. E.....Goshen
1721 Wagner, S. C.....Wakarusa
1720 Work, James A., Jr.....Elkhart
1677 Yoder, Albert C.....Goshen
1722 Zimmerman, E. R.....Elkhart

FAYETTE COUNTY

1946 Booher, I. E.....Connersville
582 Clark, J. H.....Connersville
1516 Dale, Omar E.....Everton
584 Elliott, R. H.....Connersville
585 Gordin, S. E.....Connersville
2534 Leffel, John S.....Connersville
1515 Metcalf, Henry C.....Connersville
1517 Morrow, Roy D.....Connersville
2358 Mountain, Jos. R.....Connersville
2142 Osborn, Harry S.....Connersville
586 Phillips, W. R.....R. R., Glenwood
2359 Sample, James M.....Connersville
587 Smelser, H. W.....Laurel
581 Smith, B. R.....Connersville
583 Spilman, F. J., Jr.....Connersville
2143 Walther, J. E.....Greenwood

FLOYD COUNTY

521 Ashabranner, J. H., 509 E. Spring, New Albany
514 Baxter, J. W., 1203 E. Spring St., New Albany
515 Baxter, S. M., 1201 E. Spring St., New Albany
516 Bird, J. E., 1308 E. Spring St., New Albany
509 Cook, C. P., The Elsby.....New Albany
522 Davis, C. P.....Galena
525 Day, Geo. H., Floyd Co. Bank.....New Albany
523 Engleman, H. K.....Georgetown
507 Funk, C. C, 315 E. Spring St.....New Albany
511 Harris, R. W., 621 Vincennes St., New Albany
1413 Hauss, A. P., Jr.....New Albany
508 Hazelwood, Felix W., The Elsby.....New Albany
512 Hazelwood, J. H., 904 E. Main St., New Albany
529 Leach, W. J., The Elsby.....New Albany
517 McCullough, J. Y., 624 E. Spring, New Albany
524 McKamy, A. I., 1109 E. Spring St., New Albany
513 Moore, William, The Elsby.....New Albany
527 Rutherford, R. S.....New Albany
518 Schoen, P. H., 216 W. Market St., New Albany
519 Schachlet, H. B., The Elsby.....New Albany
1414 Sigmon, E. L.....R. R., Borden
520 Starr, W. L., E. 10th and Spring, New Albany
526 Tebault, Wm. P., 921 Vincennes St., New Albany
510 Winstandley, W. C., 815 Vincennes, New Albany
530 Wolfe, H. S., 505 E. Spring St.....New Albany
528 Wray, John T., 421 N. 10th St.....Erie, Pa.

FOUNTAIN-WARREN COUNTIES

966 Beckett, C. G.....Attica
976 Bolling, L. A.....Attica
974 Bounell, E. G.....Hillsboro
977 Burlington, J. R.....Attica
978 Case, M. T.....Attica
1436 Claypool, R. W.....Melott
968 DeLancey, S. S.....Williamsport
1855 Dinsmore, W. H., 393 Ellicott Sq., Buffalo, N. Y.
967 Holly, A. C.....Attica
1602 Johnson, E. E.....New Lebanon
973 Johnson, W. A.....Perrysville
965 Kerr, A. R.....Attica
1433 Kirk, E. W.....Veedersburg
969 Lambright, S.....Covington
964 McCord, C. B.....Veedersburg
1437 Porter, Geo. S.....Williamsport
1601 Ratcliff, A. L.....Kingman
979 Rowland, George.....Covington
970 Spinning, A. L.....Covington
975 Stackhouse, Frank.....Kingman
1434 Stephenson, Richard.....West Lebanon
971 Sullivan, A. M.....Attica
972 Tilton, F. L.....Williamsport
1432 Wellenreiter, O. F.....Gessie
1435 Wert, Chas. C.....Covington

*Deceased.

FRANKLIN COUNTY

1622 Allen, I. O.....R. R., Brookville
1621 Bighom, J. C.....Oldenburg
1624 Cupp, Millard F.....Metamora
1626 Garrigus, I. D.....Brookville
1623 Gifford, L. A.....Laurel
1618 Glaser, E. M.....Brookville
1620 Hutchins, J. L.....Cedar Grove
1619 Lucas, John W.....Brookville
1625 Remark, R. R.....R. R. 4., Brookville
1617 Seal, Frank E.....Brookville

FULTON COUNTY

1397 Brown, Archibald S.....Rochester
1396 Dielman, F. C.....Fulton
1394 Ferry, Perry L.....Akron
1407 Gilbert, Albert I.....Kewanna
1398 Gould, Chas. E.....Rochester
1403 Hosman, W. C.....Akron
1401 King, Milo O.....Rochester
1400 Loring, Chas. J.....Rochester
1402 Meek, L. C.....Tiosa
1399 Overmeyer, B. F.....Leiters Ford
1395 Shaffer, H. O.....Rochester
1406 Slonaker, Clement L.....Culver
1405 Stinson, Arthur E.....Athens
1393 Taylor, H. W.....Rochester
2556 Terry, S. P.....Rochester
2424 Wait, Earl.....Macy
1404 Washburn, John M.....Kewanna

GIBSON COUNTY

710 Alexander, H. H.....Princeton
720 Arthur, H. M.....Hazelton
721 Arthur, M. L., 5007 Prospect Ave., Cleveland, O.
717 Arthur, S. I.....Patoka
707 Beresford, G. B.....Owensville
706 Brazelton, O. T.....Princeton
2053 Brown, A. P.....Princeton
715 Burton, A. R.....Princeton
705 Critchfield, J. S.....Princeton
703 Cushman, R. A.....Princeton
2134 Diefendorf, Chas. F., Coroner's Off., Evansville
718 *Lindley, C. M.....Princeton
709 Lockhart, T. L.....Owensville
716 Marchand, V. H.....Haubstadt
2054 Mason, Geo. C.....Oakland City
1367 Mason, R. S.....Oakland City
708 Maxam, F. H.....Princeton
719 McGown, J. W.....Oakland City
713 Miller, Chas. A.....Princeton
704 Montgomery, J. R.....Owensville
1366 Morris, John L.....Princeton
711 Morris, W. F.....Ft. Branch
722 Null, Chas. L.....Princeton
714 Petitjean, J. W.....Haubstadt
712 Rhodes, A. H.....Princeton
1368 Smith, Wm. H.....Oakland City
2179 Strickland, K. S.....Owensville
702 Ziliak, A. L.....Princeton

GRANT COUNTY

2185 Aldrich, Harry.....Fairmount
488 Baldwin, M. F., I. O. O. F. Bldg.....Marion
494 Braunlin, W. H., 718 Nat'l Bank Bldg., Marion
502 Brown, C. R., 603 Nat'l Bank Bldg.....Marion
489 Cameron, V. V., 201 Marks Bldg.....Marion
484 Conley, L. H.....Gas City
486 Crumrine, I. S. J.....Sweetzer
491 Dale, B. C., 412 Glass Blk.....Marion
496 Daniels, E. O., 710 Nat'l Bank Bldg.....Marion
2189 Daniels, George R.....Marion
492 Davis, A. T., 413 Nat'l Bank Bldg.....Marion
493 Davis, Merrill S., Davis Bldg.....Marion
498 Eckhart, G. G., 617 Nat'l Bank Bldg.....Marion
485 Eshelman, L. H., 2923 S. Washington St., Marion
500 Fankboner, W. A., 611 Nat'l Bank Bldg., Marion
2190 Forrest, John H.....Marion
504 Harold, E. O., 322 Nat'l Bank Bldg.....Marion
2188 Hawkins, Z. T.....Swayzee
2187 Henley, Glenn.....Fairmount
2186 Holliday, L. D.....Fairmount
2195 Johnson, James E.....Marion
533 Knight, J. C.....Jonesboro
2194 Lewis, M. J.....Marion
497 Loomis, J. F., 708 Nat'l Bank Bldg.....Marion
2196 McKay, J. D.....Marion
490 McQuown, O. W., 201 Marks Bldg.....Marion
2289 Miller, Harry, Soldiers' Home.....Danville, Ill.
501 Overman, Chas. J., 608 Nat'l Bank Bldg., Marion
495 Powell, Nettie B., 720 Nat'l Bank Bldg., Marion
532 Priest, F. A., 308 Glass Bldg.....Marion
487 Richardson, G. G.....Van Buren
503 Rogers, W. J., Nat'l Bank Bldg.....Marion
2192 Ross, J. C.....Marion
2128 Stout, O. L.....Upland
2191 Studley, J. W.....Marion
2193 Trook, E. M.....Marion
483 Vigus, Chas. B.....Swayzee
2129 Williams, D. A.....Marion
499 Williamson, Harry, 612 Nat'l Bank Bldg., Marion
2410 Zimmer, E. G.....Upland

GREENE COUNTY

2132 Amerman, Charles....Linton
2102 Berns, P. C....Linton
2182 Burkhart, Thomas A....Jasonville
2110 Clifford, J. W....Worthington
2101 Cook, Thomas R....Bloomfield
2103 Craft, Wm. F....Linton
2108 Cravens, W. R....Bloomfield
2183 Davis, Wm. M....Worthington
2133 Isaacs, H. H....Owensburg
2353 Johnson, Raymond....Worthington
2106 Lukenbill, L. C....Marco
2104 Mason, E. R....Bloomfield
2349 Osbon, G. G....Jasonville
2109 Porter, George....Linton
2131 Simons, J. S....Lyons
2551 Thayer, Marion N....Linton
2105 Thomas, Albert A....Linton
2596 Tourner, H. P....Owensburg
2107 Van Sandt, F. A....Bloomfield

HAMILTON COUNTY

1630 Baker, W. F....Carmel
1627 Baldwin, L. J....Westfield
2181 Bills, Leroy F....Atlanta
1753 Catterson, Wm. E....Noblesville
1628 Cooper, Ross A....Carmel
1639 Davenport, I. W....Sheridan
1629 Elfers, Chas. R....Jolietville
1633 Fodrea, Zeri H....Westfield
1631 Hanna, J. E....Noblesville
1635 Havens, Edward D....Cicero
1754 Haworth, Milton C....Noblesville
1818 Hicks, J. L....Arcadia
1636 Hooke, S. W....Noblesville
1638 Johnson, Paul S....Sheridan
1751 Newby, A. C....Sheridan
1752 Pettijohn, O. B....Noblesville
2369 Ray, Chas. C....Arcadia
1750 Rodenbeck, F....Arcadia
1640 Sturdevant, J. D....Noblesville
1632 *Thompson, H. H....Noblesville
1749 Tomlinson, Carl H....Cicero
1634 *Tucker, F. A....Noblesville
1637 Young, Edward M....Sheridan

HANCOCK COUNTY

2564 Allen, Joseph L....Greenfield
1841 Bruner, Chas. Herbert....Greenfield
2418 Ellingwood, James B....Fortville
1844 Ferrell, Jesse E....Fortville
2173 Gemmill, H. C., 2662 Madison Rd., Cincinnati, O.
1842 Gibbs, Earl R....Wilkinson
1845 Gibbs, Chas. Milo....Greenfield
2563 Hervey, S. W....Fortville
1843 Johnston, Wm. R....Charlottsville
2280 Kneer, Chas. J....Oaklandon
2038 Mace, E. E....New Palestine
2174 McCord, Charles E....Fortville
2598 Sisson, Ernest R....Greenfield
2562 Slocum, Stewart....Fortville
2319 Titus, Chas. R....Wilkinson

HARRISON COUNTY

1935 Amy, Wm. E....Corydon
1937 Bottorff, John C....Corydon
1936 Daniels, William....Corydon
1938 Mathys, Alfred....Mauckport

HENDRICKS COUNTY

1579 Armstrong, Lewis W....Danville
1581 Barker, Thomas R....Danville
1574 Carter, Amos....Rockville
1572 Cooper, Ernest....Plainfield
1575 Grimes, Jay H....Danville
1570 Hendricks, John D....Lizton
7 Jones, Rilus E....Clayton
1578 Kinnaman, H. A....Danville
1573 Lawson, Wilson T....Danville
1580 O'Brien, T. J....Clayton
1771 Ragan, John S....Plainfield
1514 Royer, Elmo Ray, Chief Surgeon S.A.D. Co., P. O. Box 655, Guayaquill, Ecuador, S. America
9 Scamahorn, O. T....Pittsboro
8 Smith, Thomas G....Brownburg
10 Stafford, J. C....Flainfield
1577 Terrell, Wm. H....Pittsboro
1571 Thomas, C. B....Plainfield
1576 *White, Chas. A....Danville
11 White, William H....Amo

HENRY COUNTY

2545 Arford, R. D....Middletown
2443 Beckett, Geo. T....Lewisville
1349 Bitler, C. C....Newcastle
2544 Call, Earl B....Knightstown
2202 Canaday, C. F....Newcastle
2201 Davis, Elmer J....Mooreland
1344 Hardesty, J. C....Newcastle
2444 Heilman, Wm. C....Newcastle
1348 Hess, Frank C....Cadiz
1350 Hiatt, Julius E....Newcastle
2445 Kennedy, W. U....Newcastle

1351 Kirk, Elmer E....Spiceland
2036 Koons, H. H....Newcastle
2542 Lee, Roscoe L....Newcastle
1340 MacDonald, H. W....Newcastle
1354 Marsh, Chester A....Newcastle
1339 Marshall, L. C....Mt. Summit
1347 Paul, Jos. O....Newcastle
2543 Rees, Omar H....Knightstown
2035 Smith, G. H....Newcastle
1342 Sterman, Geo. E....Newcastle
1341 Stoute, Wm. M....Newcastle
1346 Thompson, John F....Newcastle
1352 Tully, J. A....Newcastle
2200 Van Nuys, W. C....Newcastle
1345 Waters, S. C....Middletown
2446 Westhafer, E. K....Newcastle
1353 Wiggins, D. S....Newcastle
1343 Wright, Walter W....Newcastle

HOWARD COUNTY

331 Adams, C. J....Kokomo
813 Bannon, F. R....Kokomo
338 Bennett, E. N....Kokomo
330 Cochran, T. C....Kokomo
818 Cuthbert, F. S....Kokomo
2438 *DeWees, Leander....Hemlock
335 Gipe, W. W....Greentown
2368 Grable, H. G....Kokomo
329 Hamilton, N. C....Kokomo
812 Harrison, William....Kokomo
339 Hatfield, S. D....Kokomo
2366 Haworth, George D....Kokomo
333 Hutto, O. D....Kokomo
809 Knepple, L. M....Kokomo
816 Lung, B. D....Kokomo
337 Marshall, Geo. C....Kokomo
1463 Martin, Will J....Kokomo
810 McClurg, W. H....Kokomo
1462 McIndoo, R. E....Kokomo
808 Miller, A. H....Russiaville
334 Miller, H. C....Greentown
819 Morrison, W. R....Kokomo
817 Murray, F. N....West Middletown
2084 Newlin, Wm. H....New London
1460 Powell, Elmer U....Greentown
807 Puckett, J. L....Kokomo
814 Ramey, J. W....Kokomo
332 Ryan, Chas. D....Kokomo
336 Schuler, R. P....Kokomo
2367 Scott, R. F....Kokomo
328 Scott, W. I....Kokomo
1461 Shenk, Earl M....Kokomo
811 Shoaf, F. A....Kokomo
815 Wright, J. W....Kokomo

HUNTINGTON COUNTY

481 Beck, Wm. R....Huntington
455 Black, C. S....Warren
465 Bonifield, Wm. D....Warren
456 Chenoweth, A. C....Bluffton
466 Clokey, M. C....Huntington
457 Dippell, E. T....Huntington
476 Edington, B. F....Warren
471 Erehart, M. G....Huntington
458 Frost, R. F....Huntington
459 Fry, C. W....Huntington
460 Fryburger, S. S....Andrews
461 Galbreath, R. S....Huntington
467 Good, C. H....Huntington
462 Grayston, B. H. B....Huntington
463 Grayston, F. W....Huntington
464 Grayston, W. S....Huntington
468 Hicks, J. M....Huntington
474 Hoover, R. A....Bippus
469 Johnston, R. G....Huntington
470 Krebs, M. H....Huntington
475 Laymon, H. E....Warren
472 Morgan, F. B....Huntington
473 Northrop, A. H....Markle
482 O'Leary, G. M....Huntington
478 Smith, L. W....Warren
477 Smith, W. F....Huntington
479 Wimmer, G. G....Mt. Etna
480 *Wright, Chas. L....Huntington

JACKSON COUNTY

1512 Abel, Virgil....Vallonia
1498 Adair, Wm. K....Crothersville
2357 Chenoweth, E. B....Seymour
1505 Cummings, David Jos....Brownstown
1501 Gillespie, Chas. E....Seymour
1496 Graessle, Geo. G....Seymour
1494 Graessle, H. P....Seymour
1506 Harrod, N. G....Tampico
1491 Hill, L. B....Seymour
1500 Hunter, Chas. A....Seymour
1508 Jenkins, James M....Cortland
1497 Kamman, G. H....Seymour
1502 Kendall, A. P....Crothersville
1507 May, Albert....Crothersville
1509 Matlock, Neal....Medora

*Deceased.

1511	McKain, M. C.	Brownstown
1495	Niles, John H.	Seymour
1492	Osterman, A. G.	Seymour
1493	Perrin, D. L.	Seymour
1499	Richards, Polk	Brownstown
1510	Ritter, James K.	Seymour
1504	Sheilds, J. M.	Seymour
1503	Wright, Elmer D.	Seymour

JASPER-NEWTON COUNTIES

612	Bassett, C. C.	Goodland
617	Besser, E. E.	Remington
2447	Bucher, J. C.	Wheatfield
605	Collier, T. E.	Brook
621	Downes, A. W. K.	Newland
607	Edminsten, L. L.	Morocco
615	English, E. C.	Rensselaer
622	Glick, O. E.	Kentland
603	Gwin, M. D.	Rensselaer
620	Hemphill, F. H.	Rensselaer
626	Hewitt, H. S.	DeMotte
618	Johnson, C. E.	Rensselaer
610	Kennedy, Frank	Goodland
609	Kinneman, J. G.	Goodland
614	Kresler, A. R.	Rensselaer
604	Larrison, G. D.	Brook
2345	Leedom, Henry F.	Lynn
613	Leighly, P. T.	Lake Village
611	Loy, E. N.	Rensselaer
624	Martin, J. T.	Mt. Ayr
623	Mathews, W. C.	Kentland
1745	Morehouse, F. L.	Morocco
616	Rainier, Alfred	Remington
608	Recher, I. H.	Morocco
606	Triplett, C. E.	Morocco
625	Van Kirk, G. W.	Kentland
619	Washburn, I. M.	Rensselaer

JAY COUNTY

1871	Badders, A. C.	Portland
1865	Chaney, Grant	Portland
1857	Cring, Geo. V.	Portland
1957	Garber, E. C.	Dunkirk
2570	Hiatt, Edgar R.	Pennville
1861	Hiestand, Harley J.	Pennville
1870	Jay, Milton T.	Portland
1859	Jones, Howard H.	Salamonia
1858	Kidder, John J.	Salamonia
1862	Mackey, Chas. H.	Portland
1860	Markley, Henry W.	Redkey
2569	Moran, Mark M.	Portland
2267	Murray, D. P.	Dunkirk
1869	Nixon, Jesse E.	Portland
1867	Paddock, Chas. A.	Portland
1864	Perry, Geo. L.	Portland
1863	Schwartz, Wm. D.	Portland
1856	Smith, Grover A.	Bryant
1866	Walker, Wm. H.	Portland
1868	Wiley, Harriett	Portland

JEFFERSON COUNTY

374	Childs, A. G. W.	Madison
371	Cochran, R. W.	Madison
378	Cook, E. C.	Madison
376	Copeland, C. C.	North Madison
534	Denny, C. W.	Madison
377	Denny, F. C.	Madison
372	Denny, G. E.	Madison
453	Hankins, F. C.	Madison
379	Hatch, H. S.	Madison
369	Henning, Carl	Hanover
1597	Mathews, Wm. R.	R. R. 2, Madison
373	Shepherd, Vincent	Dupont
375	Totten, E. C.	Madison
380	Turner, O. A.	Madison
370	Whitsitt, S. A.	Kent

JENNINGS COUNTY

875	Benson, N. J.	Vernon
877	Case, W. W.	Nebraska
1872	Daubenheyer, M. F.	Butlerville
25	Green, John H.	North Vernon
26	Grossman, W. L.	North Vernon
2558	Hayden, David N.	Monta Dora, N. M.
876	Mathews, D. W.	Commiskey
24	McAuliffe, D. L.	North Vernon
1038	Robertson, D. W.	Deputy
27	Stemm, W. H.	North Vernon
2273	Wildman, Wm. A.	R. R. 1, Butlerville
2078	Wilson, W. L.	Scipio

JOHNSON COUNTY

99	Baker, J. V.	Edinburg
2452	Craig, James A.	Greenwood
2425	Dobyns, P. K.	Hasting, Okla.
1746	Lind, Henry Grant	Ninevah
100	Mathews, Accie E.	Franklin
1337	Murphy, O. C.	Franklin
2115	Phipps, Lelenad K.	Franklin
1338	Phipps, David L.	Whiteland
1747	Province, O. A.	Franklin
2451	Records, John N.	Franklin
2114	Saunders, D. R.	Franklin
1945	Terhune, Rufus W.	Martinsville
2308	White, Wm. H.	Edinburg
1336	Willan, Carl E.	Trafalgar
1048	Williams, L. P. V.	Whiteland
1047	Woodcock, Chas. E.	Greenwood

KNOX COUNTY

399	Beard, S. C., 10 S. Third St.	Vincennes
400	Beckes, N. E., 414 Broadway	Vincennes
401	Boyd, C. L., 114 N. Fourth St.	Vincennes
402	Bryan, C. S., Amer. Nat'l Bank Bldg.,	Vincennes
2067	Carson, S. L.	Vincennes
415	Curtner, M. L., 8th and Main Sts.	Vincennes
413	Deese, H. E.	Bicknell
1039	Downey, L. J., 504 Hart St.	Vincennes
403	Edwards, E. T., LaPlante Bldg.	Vincennes
404	Frigge, E. H., Amer. Nat'l Bank Bldg.,	Vincennes
723	Funk, V. A., LaPlante Bldg.	Vincennes
418	Gilmore, L. L.	Monroe City
405	Griffith, B. B., LaPlante Bldg.	Vincennes
406	Held, H. W., 615 Busseron St.	Vincennes
2068	Hodge, W. A.	Emison
577	Hoover, Loren	Decker
2417	Johnson, Ernest N.	Sanborn
416	Johnson, Morris, 2nd and Main Sts.,	Vincennes
574	Jones, J. G., 413 Broadway	Vincennes
407	Knapp, A. B., LaPlante Bldg.	Vincennes
408	McCormick, H. D., LaPlante Bldg.	Vincennes
579	McCoy, J. N., State Bank Bldg.	Vincennes
575	McDowell, J. D., Mayor's Office.	Vincennes
724	Myers, A. W.	Monroe City
878	Pea, E. H., 112 N. 2nd St.	Vincennes
576	Prather, S. A., 1524 N. 2nd St.	Vincennes
409	Ramsey, J. P., 606 Main St.	Vincennes
2250	Reeve, Joseph L.	Edwardsport
410	Richards, D. H., Am. Nat'l Bk. Bldg.,	Vincennes
414	Scudder, J. A.	Edwardsport
411	Smadel, J. W., 8th and Main Sts.	Vincennes
417	Small, E. F.	Decker
578	Staley, T. M.	Bicknell
412	Stewart, C. E., 7th and Buntin Sts.,	Vincennes
580	Stone, Chas. E., State Bank Bldg.	Vincennes
419	Swartzel, J. A., E. 22nd St.	Indianapolis
2184	Tade, Ellis H.	Bicknell
2552	Trueblood, J. W.	Monroe City
725	Wilson, G. H.	Bicknell
726	Wood, R. S.	Wheatland

KOSCIUSKO COUNTY

506	Adair, Noah	Etna Green
12	Anglin, G. W.	Warsaw
732	Clutter, T. J.	Mentone
981	Druley, G. N.	North Webster
573	DuBois, Chas. C.	Warsaw
560	Fernier, P. J.	Leesburg
668	Ford, L. W.	Syracuse
801	Garber, Paul A.	Sidney
13	Howard, C. Norman	Warsaw
51	Hoy, B. F.	Syracuse
800	Hoy, C. R.	Syracuse
1734	Karasek, Mathews	Warsaw
421	Landis, W. C.	Claypool
1950	Leckrone, Ira	Silver Lake
14	Leedy, C. E.	Pierceton
536	Long, Chas. R.	Pierceton
687	Lyons, J. H.	North Webster
1593	Maxwell, J. B.	Atwood
446	McDonald, A. C.	Warsaw
879	Murphy, S. C.	Warsaw
731	Potter, John E.	Milford
443	Richer, O. H.	Warsaw
1591	Saunders, J. E.	Burket
15	Siders, W. Bert	Warsaw
1592	Steele, H. F.	Claypool
1594	Stockberger, E. M.	Milford
799	Taylor, G. C., 607 Hopper Bldg., Des Moines, Ia.	
93	Thomas, Chas. E.	Leesburg
447	Van Dyke, D. G. H.	Winona Lake
1049	White, Sidney G.	Warsaw
445	Yocum, M. G.	Mentone
444	Young, F. J.	Milford

LAGRANGE COUNTY

2172	Broughton, W. H.	Wolcottville
2428	Dryer, Chas. S.	Cincinnati, Ohio
2164	Eash, S. M.	Shipshewana
2167	Grubb, Albert G.	LaGrange
2165	Hildebrandt, W. O.	Topeka
2166	Hostetler, A. J.	LaGrange
2163	Hunn, M. Fred	Shipshewana
2423	Jones, Archie	LaGrange
2171	Rarick, J. E.	Wolcottville
2161	Rozelle, C. C.	LaGrange
2170	Vaughn, Iris J.	Topeka
2168	Wade, Alfred A.	Howe
2169	Wade, Frank C.	Howe
2162	Weir, Dale C.	Mongo
2160	Wyatt, A. R.	Fort Wayne

LAKE COUNTY

2402 Alexander, W. P., 690 Broadway.....Gary
1562 Bauchbaum, M., 1082 Broadway.....Gary
2481 Bicknell, Geo. F., E. Chi. Bk. Bldg., East Chicago
2405 Bigger, W. M., 569 Hohman St.....Hammond
366 Bills, Robert N., 548 Broadway.....Gary
2247 Bolin, John T., 6365 Hohman St.....Hammond
2235 Boardman, Carl, 522 Broadway.....Gary
2242 Brink, C. C., 567 Broadway.....Gary
358 Buchanan, W. A., 590 Hohman St.....Hammond
347 Campbell, C. W., 575 Hohman St.....Hammond
341 Chevigny, J. A., 635 Hohman St.....Hammond
2567 Chidlaw, Citizens Nat'l Bank Bldg., Hammond
352 Cook, G. M., 636 Hohman St.....Hammond
1565 Craig, John A., 738 Broadway.....Hammond
2228 DeLong, Chas. A., 583 Broadway.....Hammond
364 Derian, M. H., 752 Broadway.....Gary
2230 Dewey, E. L.....Whiting
362 Doll, F. R., 1st Nat'l Bank Bldg.....Whiting
2566 Doty, Flavia M., 569 Broadway.....Gary
345 Eggers, E. L., 636 Hohman St.....Hammond
368 Evans, E. E., 515 Broadway.....Gary
1569 Faulkner, Clara.....Hobart
346 Fox, F. H., 575 Hohman St.....Hammond
2229 Friedrich, Louis M.....Hobart
1553 Giorgi, Antonio, 1651 Broadway.....Gary
365 Goad, J. H., 1111 Roosevelt St.....Gary
2234 Greene, G. S., 583 Broadway.....Gary
2523 Griffiths, David E., 816 Buchanan St.....Gary
361 Groman, H. C., 61 Rimback St.....Hammond
2401 Hale, Raleigh P., 721 Chicago Ave., East Chicago
1556 Hamilton, Robert C., Inland Steel Co., Indiana Harbor
2408 Hedrick, R. M., 1715 Broadway.....Gary
2522 Hofmann, Andrew, 114 Fayette St.....Hammond
1563 Hopper, Milton S., 469 Broadway.....Gary
2232 Hosmer, H. M., 555 Broadway.....Gary
1554 Howatt, Wm. F., 832 Hohman St.....Hammond
2227 Hughes, Wm. L., 3616 Cedar St., Indiana Harbor
2226 Iddings, H. L.....Merrillville
356 Iddings, J. W.....Lowell
1566 Jones, E. S., Ruff Bldg.....Hammond
2244 *Julien, Wm. F., 673 Broadway.....Gary
2237 Kahan, Harry L., 555 Broadway.....Gary
2249 Kan, A. M., 1700 Broadway.....Gary
2582 Keeler, K. B., 500 119th St.....Whiting
1560 Laue, W. P., 688 Broadway.....Gary
2238 Lauer, A. J.....Whiting
2525 Lawrence, Caroline C., P. O. Box 1028.....Gary
2407 Lloyd, A. W., 504 Hammond Bldg.....Hammond
1558 Loar, L. T., 1134 Broadway.....Gary
1568 Long, H. W., 583 Broadway.....Gary
2231 Mackey, Dwight.....Hobart
1557 Malmstone, F. A.....Griffith
354 McGuire, D. F., 3429 Michigan Ave., Ind. Harbor
344 McMichael, F. J., 607 Broadway.....Gary
360 Melton, O. O., 627 Hohman St.....Hammond
2483 Merritt, Frank W., Gary Hospital.....Gary
2246 Mervis, F. H., 3420 Michigan Ave., Ind. Harbor
2248 *Miller, Geo. W., 720 Chicago Ave., East Chicago
349 Miltimore, Ira, 548 Broadway.....Gary
343 Nesbit, O. B., 444 Jackson St.....Gary
340 Nichols, W. E., 1st Nat'l Bank Bldg., Hammond
2584 Newton, Edw. K., 1st Nat'l Bank Bldg., Whiting
348 Oberlin, T. W., 575 Hohman St.....Hammond
350 Ostrowski, L. J., 3802 Cedar St., Ind. Harbor
351 Ostrowski, R. O., 716 Hohman St.....Hammond
2581 Pettibone, C. R.....Crown Point
2568 Potts, Wm. A.....Lansing, Ill.
1559 Propper, I. J., 738 Broadway.....Gary
2583 Pugh, Jos. R., 61 Rimback Ave.....Hammond
2403 Putnam, W. E., 119th and Chicago Ave., Whiting
353 Rafacz, Michael, 502 119th St.....Whiting
367 Reeve, Roscoe H., Standard Oil Hosp., Whiting
2240 Reyher, C. M., 673 Broadway.....Gary
2485 Robinson, C. C., 3410 Michigan Ave., Ind. Harbor
2524 Ryan, Leo K., 625 Broadway.....Gary
1564 Schaible, E. L., 583 Broadway.....Gary
359 Schlesinger, J., 1025 Columbia Ave.....Hammond
2482 Schlieker, A. G., E. Chicago Bk. Bldg., E. Chicago
342 Shanklin, E. M., 575 Hohman St.....Hammond
1555 Skeen, E. D., 555 Broadway.....Gary
2243 Stephenson, L. E., Gary Hospital.....Gary
2245 Stone, L. L., 2162 W. 11th St.....Gary
1567 Tananewicz, A. J., 3815 Deodar St., Ind. Harbor
2239 Teegarden, J. A., 3336 Mich. Ave., Ind. Harbor
2233 Templin, Theo. B., 583 Broadway.....Gary
2404 Turbow, B. M., 2201 137th St., Indiana Harbor
2480 Verplank, Grover L., 527 Broadway.....Gary
357 Weis, W. D., Citizens Bank Bldg.....Hammond
2241 Wharton, R. O., 673 Broadway.....Gary
363 White, H. J., 561 Hohman St.....Hammond
2236 White, W. J., 790 Broadway.....Gary
2484 Wicks, Orlando C., 607 Broadway.....Gary
2406 Yarrington, C. W., 607 Broadway.....Gary
355 Young, A. A., 1825 State St.....Hammond
1561 Young, S. J., 522 Broadway.....Gary

*Deceased.

LAPORTE COUNTY

323 Annis, E. L.....LaPorte
552 Blinks, E. G.....Michigan City
204 Bowell, B. Carr.....LaPorte
199 Bowers, Whitefield.....Michigan City
209 Buck, D. A.....LaPorte
207 Burleson, C. E.....LaPorte
319 Crawford, E. F. W.....Hanna
2212 Danruthers, Chas. B.....LaPorte
318 Drescher, M. L.....Michigan City
210 Fargher, J. H.....LaPorte
555 Foster, J. H.....Michigan City
326 Funk, Neil E.....LaPorte
870 Gilmore, Russell A.....Michigan City
212 Homman, Grace Line.....LaPorte
200 Jones, R. B.....LaPorte
201 Kelly, J. N.....Westville
547 Kerrigan, J. J.....Michigan City
549 Kerrigan, J. V.....Michigan City
548 Kerrigan, R. L.....Michigan City
203 Killough, A.....Michigan City
198 Kimball, G. W.....LaPorte
325 Krieger, Geo. M.....Michigan City
322 Krueger, E. O.....Michigan City
551 Leeds, Frank R.....Michigan City
324 Martin, F. V.....Michigan City
195 Martin, H. H.....LaPorte
550 Mayfield, Chas. E.....Wanatah
208 Meyer, J. H. Wm.....LaPorte
872 Milligan, James W.....North Madison
321 Oak, D. D.....LaCrosse
1530 Pinkerton, Forest J., Alexander Young Bldg. Honolulu, Hawaii
320 Reed, Nelle C.....Michigan City
196 Rogers, J. B.....Michigan City
554 Ross, W. W.....LaPorte
202 Short, R. B.....Union Mills
205 Simon, A. R.....LaPorte
206 Smith, Milton S.....LaPorte
211 Sutherland, O. L.....LaPorte
553 Tillotson, A. G.....Michigan City
871 Walkinshaw, William.....Stillwell
874 Warren, F. R.....Michigan City
873 Weeks, P. H.....Michigan City
197 Wilcox, F. T.....LaPorte
327 Wilson, LeRoy A.....Michigan City

LAWRENCE COUNTY

2048 Byers, Norman B.....Bedford
1329 Byrns, James D.....Mitchell
1334 Cain, Jasper.....Heltonville
1319 Dollens, Claude.....Oolitic
1328 Emery, Chas. H.....Bedford
1332 Freeland, John T.....Bedford
2062 Gibbons, Geo. Lee.....Mitchell
1317 Gibson, John A.....Mitchell
1313 Holland, D. J.....Bedford
1326 Hunter, F. S.....Bedford
1322 Kelley, John C.....Mitchell
1321 Martin, Frank D.....Bedford
1330 Matlock, H. J.....Campbellsburg
1327 McDonald, A. J.....Bedford
1311 McFarlin, John T.....Williams
1314 Mitchell, E. E.....Bedford
1315 Pearson, John.....Bedford
1316 Perkins, E. L.....Bedford
1324 Rariden, Chas. E.....Bedford
1312 Sherwood, Walter C.....Mitchell
1331 Short, R. B.....Bedford
1333 Simpson, Morrell E.....Bedford
1323 Smith, S. W.....Leesville
1318 Voyles, Harvey.....Bedford
1320 Woolery, Perry.....Heltonville
1325 Wynne, R. E.....Bedford

MADISON COUNTY

2154 Alexander, L. E.....Pendleton
2440 Armington, Chas. L.....Anderson
2606 Armington, John C.....Anderson
2157 Austin, M. A.....Anderson
423 Brauchla, C. H.....Anderson
268 Brock, E. E.....Anderson
1363 Charles, Etta.....Anderson
257 Collins, A. W.....Anderson
260 Conrad, E. M.....Anderson
1360 Cotton, C. C.....Elwood
2478 Cullipher, J. E.....Elwood
262 Fattic, J. B.....Anderson
259 Fleming, H. G.....Anderson
264 Gante, H. W.....Anderson
255 Garretson, W. M.....R. R. 6, Anderson
159 Hall, J. E.....Alexandria
2155 Harter, Wm. P.....Anderson
90 Hoppenwrath, W. H.....Elwood
91 Hoppenwrath, W. M.....Elwood
1042 Hunt, Lee F.....Anderson
266 Irwin, Seth.....Summitville
424 Jones, H. E.....Anderson
267 Jones, T. M.....Anderson
1046 Keller, F. G.....Alexandria

1045 Kimball, Fred A.....Anderson
171 King, B. A.....Anderson
2156 Long, James A.....Anderson
1361 Martindale, H. C.....Pendleton
2159 Mayfield, C. H.....Perkinsville
263 McDonald, V. G.....Anderson
258 McWilliams, O. E.....Anderson
92 Meister, Doris.....Anderson
1040 Mendenhall, F. F.....Elwood
256 Metcalf, G. B.....Anderson
261 Miley, I.....Anderson
160 Miley, W. M.....Anderson
1043 Mobley, L. F.....Summitville
94 Morris, C. F.....Anderson
170 O'Neil, T. J.....Anderson
1362 Otto, A. E.....Alexandria
1365 Peck, W.....Frankton
422 Rinne, John I.....Lapel
2365 Schurtz, C. D.....Alexandria
1364 Sparks, W. R.....Pendleton
425 Thornburg, F. L.....Middletown
169 Tracy, J. R.....Anderson
2503 Walton, Charles A.....Anderson
265 Williams, F. M.....Anderson
1044 Williams, L. O.....Anderson
2158 Willson, S. C.....Anderson
1041 Whitledge, Geo. A.....Anderson

MARION COUNTY

1738 Abbett, Frank E., 608 H.-Mansur, Indianapolis
1175 Adams, D. S., 521 Hume-Mansur, Indianapolis
2474 Aikman, E. M., 901 I. O. O. F., Bldg., Indianapolis
1251 Alburger, H. R., 404 Hume-Mansur, Indianapolis
2449 Allen, Horace R., 1843 N. Illinois, Indianapolis
1607 Amos, E. M., 524 Hume-Mansur, Indianapolis
1141 Anderson, D. A., 1214 Prospect St., Indianapolis
1253 Anderson, J. C., 108 S. Audubon Rd., Indianapolis
1110 Anderson, R. J., 42 W. Denny St., Indianapolis
1207 Aspy, J. A. M., 408 Hume-Mansur, Indianapolis
1430 Auble, C. S., 1415 Shelby St.....Indianapolis
1256 Ayers, A. S., 208 Bankers Tr. Bldg., Indianapolis
1219 Bahr, Max A., Cen. Insane Hospital, Indianapolis
2153 Banister, R. F., 516 Pythian Bldg., Indianapolis
1050 Barnes, I. C., 432 Newton-Claypool, Indianapolis
1177 Barnhill, J. F., 721 K. of P. Bldg., Indianapolis
1083 Barry, M. Jos., 57 Willoughby Bdg., Indianapolis
1445 Bayer, Chas. F., 1617 Bellefontaine, Indianapolis
1101 Beasley, Thos. J., 427 Bankers Tr., Indianapolis
1145 Beck, Flavius J., 3142 Central Ave., Indianapolis
1429 Beck, Wm. S., 1831 N. Meridian St., Indianapolis
1131 Beckman, H. F., 513 Hume-Mansur, Indianapolis
1265 Beeler, R. C., 714 Hume-Mansur, Indianapolis
1148 Berauer, J. M., 1355 Madison Ave., Indianapolis
1616 Berry, D. F., 710 Hume-Mansur, Indianapolis
2530 Beveland, M. E., 3036 E. Wash. St., Indianapolis
1259 Boaz, John J., 617 Bankers Trust, Indianapolis
1237 Boggs, Wm. R., R. R. E, Box 163.....Indianapolis
2152 Bond, Geo. S., 2339 Central Ave.....Indianapolis
2120 Bonn, Harry K., 201 Pennway Bldg., Indianapolis
2252 Bower, J. V., 3438 Orchard Ave., Indianapolis
1077 Bowman, Geo. W., 816 E. Orange, Indianapolis
1060 Boyle, Wm. V., 311 Hume-Mansur, Indianapolis
2579 Brayton, A. W., 636 Pythian Bldg., Indianapolis
1531 Brayton, Frank A., 328 Bank. Trust, Indianapolis
1428 Brill, James H., 608 N. New Jersey, Indianapolis
2044 Brown, B. A., 2423 Station St.....Indianapolis
1168 Brown, E. A., 1519 Pleasant St.....Indianapolis
1267 Brubaker, E. H., 529 Bankers Trust, Indianapolis
1735 Bull, J. H., 607 Kahn Bldg.....Indianapolis
1091 Burckhardt, Louis, 621 H.-Mansur, Indianapolis
1226 Burris, E. W., 2608 Michigan St. W., Indianapolis
1225 Butler, R. A.....Beech Grove
1127 Cabalzer, C. L., 508 Hume-Mansur, Indianapolis
2027 Cahal, E. E., 2622 Shelby St.....Indianapolis
1212 Campbell, C. C., Ft. McHenry, Baltimore, Md.
1876 Canady, James W., 1229 Prospect, Indianapolis
1176 Caraway, S. H., 1810 Montcalm St., Indianapolis
1165 Carmack, John W., 37 Willoughby, Indianapolis
1240 Carter, J. C., 507 Hume-Mansur, Indianapolis
1099 Carter, Larue D., 1820 E. 10th St., Indianapolis
1250 Chappell, R. S., Trac. & Term. Bldg., Indianapolis
1171 Christie, J. P., 424 Hume-Mansur, Indianapolis
1065 Christian, G. R., 1717 Prospect St., Indianapolis
1118 Clark, Edm. D., 712 Hume-Mansur, Indianapolis
1182 Clevenger, Wm. F., 403 Hume-Man., Indianapolis
1061 Coble, Geo. A.....New Augusta
2381 Coble, Ralph R., 2701½ College, Indianapolis
1181 Cole, Albert M., 712 Hume-Mansur, Indianapolis
1104 Combs, Geo. W., 417 Pennway Bldg., Indianapolis
1185 Conway, Robert E., 319 Pyth. Bldg., Indianapolis
2422 Cook, Chas. J., 1107 I.O.O.F. Bldg., Indianapolis
2080 Copeland, S. J., 427 Bankers Trust, Indianapolis
1186 Corya, H. W., 603 Hume-Mansur, Indianapolis
1454 Cottingham, C. E., 416 Bd. of Trade, Indianapolis
2121 Courtney, Thomas E., 606 Pythian, Indianapolis
1948 Craft, K. L., 226 Hume-Mansur, Indianapolis
1058 Cregor, F. W., 724 Hume-Mansur, Indianapolis
1949 Cox, Clifford E., 441 Highland Ave., Indianapolis
2079 Cox, Homer W., 2715 E. Wash. St., Indianapolis
1154 Cunningham, J. M., 508 Hume-Man., Indianapolis

*Deceased.

2025 Custer, A. T., 617 Hume-Mansur, Indianapolis
1211 Davis, John Q., 409 Rank Bldg., Indianapolis
2473 Day, Clark E., 704 Bankers Trust, Indianapolis
2122 Dean, M. F., 402 Hume-Mansur.....Indianapolis
2029 DeHass, T. W., 711 Hume-Mansur, Indianapolis
1447 Doeppers, Wm., 610 Hume-Mansur, Indianapolis
2351 Dubois, Edward J., 238 E. Tenth St., Indianapolis
2061 Duckworth, J. W., Ft. Wm. McKinley, Rizal, Philippine Islands
2302 Dugan, Thos. J., 2538 W. Wash. St., Indianapolis
1615 Dunbar, Colin V., 424 H.-Mansur, Indianapolis
1252 Dunning, L. M., 1545 Roosevelt.....Indianapolis
1446 Durham, Chas. O., 2035 Penn St., Indianapolis
1198 Earp, S. E., 634 Occidental Bldg., Indianapolis
1214 Eastman, J. R., 331 N. Delaware St., Indianapolis
1199 Eberwein, J. H., 720 Hume-Mansur, Indianapolis
1271 Edenharter, Geo. F., Cen. Ins. Hos., Indianapolis
1268 Erdman, Bernard, 27 Willoughby, Indianapolis
2024 Edwards, Scott R., 1008 H.-Mansur, Indianapolis
1126 Egart, Stephen L., 468 Blake St., Indianapolis
1108 Egbert, Jas., 226 Bankers Trust, Indianapolis
2301 Egbert, Roy, 2601 Roosevelt Ave., Indianapolis
1879 Emerson, Chas. P., 602 H.-Mansur, Indianapolis
1193 Emhardt, J. W., 1603 S. East St., Indianapolis
1116 Engle, Walter C., 2621 E. 25th St., Indianapolis
2361 Ensminger, L. A., 614 H.-Mansur, Indianapolis
1270 Ferguson, C. E., 412 E. 17th St., Indianapolis
2303 Ferguson, K. W., Cen. Ins. Hosp., Indianapolis
1161 Fisk, Frank B., 116 E. 30th St., Indianapolis
1162 Fitch, Frank M., 226 Bank. Trust, Indianapolis
1133 Foreman, Harry L., 3318 N. Capitol, Indianapolis
1155 Foreman, Wm. H., 414 H.-Mansur, Indianapolis
1142 Fosler, D. W., 601 Hume-Mansur, Indianapolis
1266 Foxworthy, F. W., 1135 State Life, Indianapolis
2304 Frazier, C. N., 509 Hume-Mansur, Indianapolis
1608 Funkhouser, Elmer, 1301 Central, Indianapolis
1115 Furniss, S. A., 401 N. Senate Ave., Indianapolis
1059 Gabe, Harry E., 606 Hume-Mansur, Indianapolis
1132 Gabe, Wm. E., 712 Hume-Mansur, Indianapolis
1874 Garrett, J. D., Willoughby Bldg., Indianapolis
1261 Garrettson, J. A., 401 Hume-Mansur, Indianapolis
1183 Garshwiler, Wm. P., Ind. Pythian, Indianapolis
1172 Gatch, W. D., 605 Hume-Mansur, Indianapolis
1143 Gaylord, H. G., 1066 Virginia Ave., Indianapolis
1260 Gick, H. H., 2705 E. Michigan St., Indianapolis
1246 Gutelius, C. B., 416 Bd. of Trade, Indianapolis
1426 Goar, Chas. S., 704 Bankers Trust, Indianapolis
1066 Graham, A. B., Willoughby Bldg., Indianapolis
1222 Graham, Hannah, 406 Kahn Bldg., Indianapolis
2057 Graham, N. P., 1003 Hume-Mansur, Indianapolis
1113 Gramling, J. J., 3328 Clifton St., Indianapolis
1234 Gundelfinger, B. M., 34 Willoughby, Indianapolis
1929 Guthrie, G. L.....Greenwood
2378 Habich, Carl, 701 Hume-Mansur, Indianapolis
2470 Hadley, Murray N., 608 H.-Mansur, Indianapolis
1152 Harold, A. H., 500 Meridian Life, Indianapolis
1609 Harold, N. E., 435 Bankers Trust, Indianapolis
1138 Haslep, Marie, 1815 College Ave., Indianapolis
1197 *Hoskins, W. D., 420 Hume-Mansur, Indianapolis
2495 Hatch, H. S., Sunnyside Sanitarium, Oaklandon
1236 Hatfield, J. H., 4925 E. Michigan St., Indianapolis
1129 Hatfield, S. J., 409 I.O.O.F. Bldg., Indianapolis
1221 Heinrichs, H. H., 740 Bankers Trust, Indianapolis
1069 Hendricks, R. G., 1003 H.-Mansur, Indianapolis
1147 Hetherington, A. M., 718 H.-Mansur, Indianapolis
1062 Henry, Alfred, 720 Hume-Mansur, Indianapolis
1094 Hickman, W. F., 834 Marion Ave., Indianapolis
1075 Hoag, Wm. L., 2627 W. Wash. St., Indianapolis
2379 Hobbs, Alice L., 5828 E. Wash. St., Indianapolis
1242 Hodges, Fletcher, 717 H.-Mansur, Indianapolis
1202 Hofmann, J. Wm., 705 Ind. Pythian, Indianapolis
1180 Hamer, Homer G., 723 H.-Mansur, Indianapolis
1086 Hood, Thos. C., 1008 Hume-Mansur, Indianapolis
1229 House, J. W., 2150 Central Bldg., Indianapolis
1067 Hughes, J. E., 950 S. Meridian St., Indianapolis
2047 Hughes, Wm. F., 401 Hume-Mansur, Indianapolis
1071 Humes, Chas. A., Hume-Mansur, Indianapolis
1052 Hurt, Paul T., 406 Hume-Mansur, Indianapolis
1080 Hurty, John N., State House.....Indianapolis
2577 Hutchins, Frank F., 1455 N. Penn., Indianapolis
2059 Hutcheson, H. A., 2206 E. Wash. St., Indianapolis
1109 Jackson, G. B., 603 Hume-Mansur, Indianapolis
1248 Jackson, Jesse L., 3001 E. 10th St., Indianapolis
1063 Jacobs, Harry A., 332 Bankers Tr., Indianapolis
1215 Jaeger, A. S., 430 Bankers Trust, Indianapolis
2554 Jameson, Henry, 608 Hume-Mansur, Indianapolis
1241 Jeffries, K. J., Woessner Bldg.....Indianapolis
1206 Jennings, Wm. L., R. R. O, Box 75, Indianapolis
2060 Jobes, Norman E., Trac. Ter. Bldg., Indianapolis
1216 *Johnston, S. A., 624 Hume-Mansur, Indianapolis
1427 Johnson, Thomas B.....Ben Davis
2045 Johnson, Wm. F., 314 Bankers Tr., Indianapolis
1533 Kahn, David L., 130 E. 22nd St., Indianapolis
1097 Kast, Marie B., 1217 E. Vermont St., Indianapolis
1124 Kearby, D. O., 422 Amer. Cen. Life, Indianapolis
2572 Keene, T. Victor, 501 Hume-Mansur, Indianapolis
1452 Kelly, Walter F., 5503 E. Wash. St., Indianapolis
1879 Kemper, Robt. J., 237 N. Noble St., Indianapolis
1072 Kenneday, Bernays, 50 Willoughby, Indianapolis

1218 Kennedy, Thos. C., 708 H.-Mansur, Indianapolis
1927 Kennedy, Wm. H., 708 H.-Mansur, Indianapolis
1055 Ketcham, Jane M., 513 H.-Mansur, Indianapolis
1156 *Kimberlin, A. C., Willoughby Bldg., Indianapolis
1224 Kime, E. N., 414 Hume-Mansur, Indianapolis
1611 King, Mollie, 715 Third Ave., Eau Claire, Wis.
1194 Kiser, Edgar F., 226 Hume-Mansur, Indianapolis
1272 Kitchen, W. B., 706 Hume-Mansur, Indianapolis
1159 Klein, F. C., 911 Virginia Ave.....Indianapolis
1282 Knox, Edwin S., 1404 Hoyt Ave., Indianapolis
2576 Kohlstaedt, G. Wm., 2174 Madison, Indianapolis
2471 Kurtz, F. B., 410 Occidental Bldg., Indianapolis
1451 Kyte, Edwin G., 1714 Ruckle St., Indianapolis
1239 Langdon, H. K., 403 Hume-Mansur, Indianapolis
1173 Lapenta, Vincent A., 347 Bank. Tr., Indianapolis
1111 Larkin, B. J., 703 Hume-Mansur, Indianapolis
1532 Layman, D. W., 608 Hume-Mansur, Indianapolis
1244 Leasure, J. Kent, 422 Am. Cen. Life, Indianapolis
2573 Lee, D. F., 443 Bankers Trust Bldg., Indianapolis
2420 Lemmon, H. J., Talley Bldg.....Newport, Tenn.
1119 Leonard, Henry S., 19th St. and College. Indianapolis
1114 Lewis, J. R., Pine & Fletcher Ave., Indianapolis
1117 Light, Mason B., 924 E. 63rd St., Indianapolis
1238 Lindenmuth, E. O., 623 N. Penn. St., Indianapolis
1610 Lingeman, Byron N., 408 Pennway, Indianapolis
1158 Lingeman, E. L., 408 Hume-Mansur, Indianapolis
1228 Link, Goethe, 606 Pythian Bldg., Indianapolis
1606 Little, J. W., 2635 E. Tenth St.....Indianapolis
1188 Little, W. D., 605 Hume-Mansur, Indianapolis
1258 Lochry, Ralph L., 219 E. 17th St., Indianapolis
1205 Lohrmann, H., Spdwy. & White Riv., Indianapolis
1223 Long, J. B., 760 W. New York St., Indianapolis
1877 Long, Wm. H., 402 N. West St., Indianapolis
2380 Lukenbill, E. D., 219 Bankers Trust, Indianapolis
1074 Lukenbill, O. C., 219 Bankers Trust, Indianapolis
1174 MacDonald, J. A., 408 H.-Mansur, Indianapolis
2472 MacGregor, Donald E., 2627 W. Michigan, Indianapolis
1179 Magennis, H. L., 619 Occidental, Indianapolis
1144 Malpas, Samuel H., 318 K. of P., Indianapolis
1149 Mann, Frank C., Mayo Clinic, Rochester, Minn.
1740 Marlatt, Clarence L., 704 Kahn Bdg. Indianapolis
2535 Marshall, A. L., 520 Hume-Mansur, Indianapolis
1057 Marshall, C. R., 1539 Illinois St., Indianapolis
2305 Martin, Frank N., 517 H.-Mansur, Indianapolis
2590 Martin, Paul, 11 B Nanking Rd., Shanghai, China
1883 Martz, Geo. J., 1273 Oliver Ave.....Indianapolis
1190 Marxer, Conrad W., 505 E. McCarty, Indianapolis
1255 Masters, Robt. J., 422 H.-Mansur, Indianapolis
1274 Maxwell, Leslie H., 408 H.-Mansur, Indianapolis
1081 Mayer, F. W., 424 Hume-Mansur, Indianapolis
1217 McAlexander, R. O., 740 Bank. Tt., Indianapolis
2058 McBride, Wm. A., Willoughby Bldg., Indianapolis
1243 McCarty, P. W., 1928 W. Wash. St., Indianapolis
1123 McCaskey, C. H., 422 Am. Cen. Life, Indianapolis
2574 McCaskey, Geo. H., 422 Am. Cen. Life Bldg., Indianapolis
1947 McConnell, M. W.....Sullivan
2421 McCool, John F., 1410 E. Wash. St., Indianapolis
1380 McCormick, Chas. O., 414 Hume-Mansur Bldg., Indianapolis
1150 McCown, P. E., 521 Hume-Mansur, Indianapolis
1105 McCullough, C. B., 1135 State Life, Indianapolis
1612 McFarlin, Chas. C.....Castleton
1053 McIntyre, Chas. J., 414 H.-Mansur, Indianapolis
1098 McKittrick, Ora K., 325 Bd. of Tr., Indianapolis
1931 McLeay, Jno. D., 157 W. Illinois St., Indianapolis
2430 McMillan, F. G., 320 Pennway Bldg., Indianapolis
1136 Mendenhall, A. M., 33 Bankers Tr., Indianapolis
1269 Mercer, Oliver P., 536 Beville Ave., Indianapolis
1928 Mertz, H. O., 723 Hume-Mansur, Indianapolis
2429 Miller, Don L., 1631 Howard St., Indianapolis
1085 Miller, J. Don, 513 Hume-Mansur, Indianapolis
1739 Milliken, R. A., 613 Hume-Mansur, Indianapolis
1167 Molt, Wm. F., 529 Bankers Trust, Indianapolis
1189 Moon, V. H., 2105 N. Delaware St., Indianapolis
2415 Moore, Ben B., 3307 N. Capitol Ave., Indianapolis
1135 Moore, Robt. M., 521 Hume-Mansur, Indianapolis
2553 Morgan, H. G., City Hall.....Indianapolis
2362 Morrison, Frank A., 40 Willoughby, Indianapolis
1220 Morrow, Jos. E., 612 Hume-Mansur, Indianapolis
2496 Morton, Walter P., 521 H.-Mansur, Indianapolis
1068 Moschelle, J. D., 901 I.O.O.F. Bldg., Indianapolis
1230 Mozingo, A. E., 720 Pythian Bldg., Indianapolis
1096 Mueller, Lillian B., 4506 E. Wash., Indianapolis
1139 Mumford, E. B., 408 Hume-Mansur, Indianapolis
1160 Neier, Oliver C., 1225 Prera, San Antonio, Texas
1284 Neely, A. S., 1110 Churchman St., Indianapolis
1121 Neu, Chas. F., 608 Hume-Mansur, Indianapolis
1056 Newcomb, John R., 410 H.-Mansur, Indianapolis
1120 Nicodemus, J. P., 1105 N. Keystone, Indianapolis
1153 Noble, Thos. B., 1008 Hume-Mansur, Indianapolis
1064 Noble, Thos. B., Jr., 1008 H.-Mansur, Indianapolis
2082 Nolting, H. F., 2446 Pierson Ave., Indianapolis
1102 Norman, Olin B., 513 Hume-Mansur, Indianapolis
1125 Ogle, Albert A., 226 Ind. Pyth. Bdg., Indianapolis
1378 Oliver, J. H., 510 Hume-Mansur, Indianapolis
1614 Orders, C. E., 836 W. 30th St.....Indianapolis

1184 Ottinger, R. C., 508 Hume-Mansur, Indianapolis
1285 Overman, F. V., 508 Hume-Mansur, Indianapolis
1737 Padgett, E. E., 424 Hume-Mansur, Indianapolis
1151 Page, Lafayette I., 603 H.-Mansur, Indianapolis
2026 Pantzer, H. O., 601 Hume-Mansur, Indianapolis
1201 Pebworth, Aubrey C., 1225 Reissner, Indianapolis
2477 Pennington, W. E., 414 H.-Mansur, Indianapolis
1084 Peters, R. J. D., 3108 E. Mich. St., Indianapolis
1134 Pettijohn, Fred L., 2460 Cen. Ave., Indianapolis
1453 Pfaff, John A., 333 Bankers Trust, Indianapolis
2360 Pfaff, O. G., 333 Bankers Trust.....Indianapolis
1169 Pfafflin, Chas. A., 445 Bankers Tr., Indianapolis
1203 Quimby, Smith A., Camp Hustis Hospital, Lee Hill, Va.
1450 Reed, Jewett V., 620 Hume-Mansur, Indianapolis
1281 Repass, Robert E., 508 H.-Mansur, Indianapolis
1210 Ricketts, J. W., 30 Willoughby Bdg., Indianapolis
1235 Ridgeway, Ora W., 417 E. 16th St., Indianapolis
1054 Rinker, Earl B., 620 H.-Mansur, Indianapolis
1073 Rissler, Ross S., 2865 Clifton St., Indianapolis
1100 Ritchey, J. Oscar, Long Hospital.....Indianapolis
1093 Robertson, J. F., 2313 E. Mich. St., Indianapolis
1455 Robinson, Leigh F., 164 High, Hartford, Conn.
1200 Robinson, Paul F., 1507 E. Wash., Indianapolis
2363 Rogers, Clarke, 624 Hume-Mansur, Indianapolis
1209 Ross, David, 416 Bd. of Trade Bldg., Indianapolis
1157 Row, Geo. S., 905 Hume-Mansur, Indianapolis
1873 Rowe, L. M., 538 N. Pennsylvania, Indianapolis
2575 Royster, Wm. L., 803 I.O.O.F. Bldg., Indianapolis
1051 Rudesill, C. L., 408 Hume-Mansur, Indianapolis
1140 Ruddell, Karl R., 610 H.-Mansur, Indianapolis
2476 Rubush, Guy Wm., 1716 E. Wash., Indianapolis
1926 Rupel, Ernest, 419 Hume-Mansur, Indianapolis
1191 Rutledge, Carl W., 1215 Kentucky, Indianapolis
2431 Schaefer, C. R., Willoughby Bldg., Indianapolis
1534 Schneider, A. J., 1664 S. Meridian, Indianapolis
1088 Schweitzer, Ada E., 330 State House, Indianapolis
1082 Sciffres, John G., 212 Stewart Pl., Indianapolis
2312 Segar, Louis H., 226 Hume-Mansur, Indianapolis
1070 Sessions, Kenosha, R. R., Box 1.....Indianapolis
2475 Sharp, Harry Clay, 58 Vendosa Apt., 1st and 3rd St. N. W., Washington, D. C.
1078 Sharp, Walter N., 711 H.-Mansur, Indianapolis
1187 Sheridan, A. J., 1647 Lexington, Indianapolis
2081 Shimer, Wm., State Bd. of Health, Indianapolis
1381 Shuler, Lacey L., 510 H.-Mansur, Indianapolis
2578 Siersdorfer, T. N., 120 Garfield Ave., Indianapolis
2313 Sluss, John W., 226 Bankers Trust, Indianapolis
1884 Smiley, Orvall, 219 Bankers Trust, Indianapolis
1122 Smith, James M., 3026 E. 10th St., Indianapolis
1208 Smith, Martha J., 2149 N. Penn. St., Indianapolis
1178 Smith, Roy Lee, 619 Occidental.....Indianapolis
1245 Solomon, R. A., 425 E. 30th St., Indianapolis
2314 Sowder, Chas. R., 408 Pennway, Indianapolis
1932 Spencer, M. J., 2719 E. Wash. St., Indianapolis
1195 Spink, Mary A., 1140 E. Market St., Indianapolis
1196 Spink, Urbana, 1140 E. Market St., Indianapolis
1283 Sputh, Carl B., 20 Willoughby Bdg., Indianapolis
1247 Stayton, Chester A., 511 Merid. Life, Indianapolis
1277 Steele, M. F., Hope-Methodist Hosp., Fort Wayne
1227 Sterne, A. E., 1820 E. 10th St.....Indianapolis
1213 Stevens, O. L., Cen. Insane Hosp., Indianapolis
1736 Stillson, Jos. O., 716 Pythian Bldg., Indianapolis
1095 Stockton, Sarah, Cen. Insane Hosp., Indianapolis
1279 Storch, L. A. E., 1139 S. Meridian, Indianapolis
1130 Storms, Roy B., 311 Hume-Mansur, Indianapolis
2083 Strickland, C. R., 207 Hume-Mansur, Indianapolis
1087 Sullivan, Thos. L., 55 Willoughby, Indianapolis
1076 Sutcliff, J. A., 155 E. Market St., Indianapolis
1192 Talbott, John H., 402 Union Station, Indianapolis
1263 Taylor, James H., 618 H.-Mansur, Indianapolis
1280 Terrell, B. J., 5528 E. Wash. St., Indianapolis
1444 Thomas, E. C., 209 Bankers Trust, Indianapolis
1257 Thrasher, J. R., 710 Ind. Pythian, Indianapolis
2046 Thayer, Jos. O., 422 Hume-Mansur, Indianapolis
1875 Thurston, A. L., Willoughby Bldg., Indianapolis
1275 Thurston, H. S., 43 Willoughby.....Indianapolis
2028 Tinney, Wm. E., 416 Bd. of Trade, Indianapolis
1107 Todd, Robt. N., 1723 Capitol Ave., Indianapolis
1164 Tomlin, Wm. S., 520 Hme-Mansur, Indianapolis
1090 Torian, Oscar N., 621 H.-Mansur, Indianapolis
1106 Truitt, Frank L., 306 Pennway Bdg., Indianapolis
1146 Van Osdol, Harry A., 314 Bd. of Tr., Indianapolis
1264 Voyles, Chas. F., 803 I.O.O.F. Bldg., Indianapolis
1103 Wagner, Herbert T., 1002 I.O.O.F., Indianapolis
1112 Wales, E. DeWolfe, 620 H.-Mansur, Indianapolis
1882 Walker, Frank C., 414 H.-Mansur, Indianapolis
1166 Walker, H. A., 416 Bd. of Trade, Indianapolis
1930 Walters, Arthur L., Eli Lilly & Co., Indianapolis
1262 Watters, P. J., 1802 Ingram St., Indianapolis
1278 Ward, Clay L., No. 1 Fair Bldg., Indianapolis
1741 Warfel, F. C., Willoughby Bldg., Indianapolis
1878 Weer, Harry H., 705 Hume-Mansur, Indianapolis
1231 Wehrman, J. O., 804 Hume-Mansur, Indianapolis
1276 Weil, Harry J., 2101 E. Michigan, Indianapolis
1137 Weller, Chas. A., 614 Hume-Mansur, Indianapolis
1092 Wells, Geo. M., 2126 College Ave., Indianapolis
1079 Weyerbacher, A. F., 716 Ind. Pyth., Indianapolis
1170 Wheeler, Homer H., 311 H.-Mansur, Indianapolis

*Deceased.

1431 Wheeler, J. T., Flat B, Kenilworth Apts., Indianapolis
1880 Whitaker, Joel, 305 Hume-Mansur, Indianapolis
1249 White, John A., 1002 I.O.O.F. Bdg., Indianapolis
1613 Whitehead, J. M., 1540 Roosevelt, Indianapolis
1233 Williams, Luther, 232 Bankers Tr., Indianapolis
1881 Wilson, A. L., 420 Hume-Mansur, Indianapolis
1163 Wishard, Wm. N., 723 H.-Mansur, Indianapolis
1128 Wood, G. W., 2815 Clifton St., Indianapolis
1254 Woodbury, H. E., 32 E. 32nd St., Indianapolis
1232 Woods, C. S., 3129 N. Delaware St., Indianapolis
1742 *Woolen, G. V., Am. Cen. Life Bldg., Indianapolis
1273 Wright, J. Wm., 610 Hume-Mansur, Indianapolis
1204 Wynn, Frank B., 421 Hume-Mansur, Indianapolis
1089 Young, James B., Cumberland

MARSHALL COUNTY

1779 Denison, R. C., Bremen
1786 Draper, R. H., Bremen
1781 Eley, L. D., Plymouth
1782 Eley, T. C., Plymouth
2521 Fuller, W. H., Plymouth
1775 Graham, C. R., Bourbon
1780 Holtzendorff, Chas. F., Plymouth
1787 Kelly, Frank H., Argos
1789 Kendall, John T., Argos
1791 Knott, Harry, Plymouth
1777 Loring, Samuel C., Plymouth
2520 Mackey, C. G., Culver
1792 Marshall, George L., Bourbon
1776 Radcliff, Floyd E., Bourbon
1788 Reed, Chas. E., Culver
1785 Sarber, Wallace C., Argos
2329 Schilt, T. S., Pierceton
1784 Shipley, John B., LaPaz
1783 Stephens, R. C., Plymouth
1778 Tallman, Homer H., Culver
1790 Thompson, Alfred A., Tyner
2585 Wiseman, B. W., Culver

MARTIN COUNTY

2400 Hays, Thomas A., Burns City
2049 Long, Edward E., Shoals
2056 Michaels, Jos. F., Loogootee
2055 Robinson, Geo. M., Loogootee
2350 Strange, John Wm., Loogootee

MIAMI COUNTY

2092 Andrews, E. H., Peru
2093 Brookie, R. W., Converse
2087 Carlson, E. A., Peru
2176 Eikenberry, B. F., Peru
2089 Freeze, J. A., Bunker Hill
2292 Griswold, E. H., Peru
2175 Haas, Homer C., Peru
2347 Jordan, Cecil, Peru
2300 Kalbfleisch, A. H., Mercedes, Texas
2346 Kratzer, Eugene F., R. R., Bennet's Switch
2348 Line, H. E., Chili
2096 Lynn, F. M., Peru
2099 Malouf, S. D., Peru
2178 Malsbury, L. O., Peru
2100 McDowell, M. A., Peru
2095 Newell, A. S., Converse
2293 Rendel, Chas. F., Mexico
2097 Resler, F. L., Upland
2091 Ridenour, D. C., Peru
2090 Taylor, M. H., Macy
2098 Van Mater, Geo. G., Peru
2088 Wagner, M. L., Peru
2291 Wainscott, O. C., Peru
2177 Wallace, L. S., Bunker Hill
2094 Waymire, E. S., Denver
2533 Yarling, John E., Peru

MONROE COUNTY

2118 Austin, F. H., Bloomington
738 Batman, F. H., 214 E. Fifth St., Bloomington
739 Culmer, W. N., 311 E. Fifth St., Bloomington
746 Hachat, F. I. J., Indiana Univ., Bloomington
2528 Haris, C. E., Bloomington
747 Harris, O. K., Ellettsville
742 Harris, W. W., Henry Kerr Bldg., Bloomington
734 Holland, G. F., 108 W. Seventh St., Bloomington
737 Holland, J. E. P., Box 16, Bloomington
741 Kentling, Jos., 201 S. College St., Bloomington
2116 Luzadder, J. E., Bloomington
2527 Mitchell, G. L., Smithsville
745 Morris, O. M., S. College St., Bloomington
2427 Moser, Joseph E., Bloomington
736 Myers, B. D., 321 N. Wash. St., Bloomington
2117 Reed, Wm. C., Bloomington
735 Smith, R. D., 120 E. Sixth St., Bloomington
744 Stroup, Chas. C., 107 E. Fifth St., Bloomington
733 Tourner, F. F., 311 S. College St., Bloomington
2130 Tourner, John P., Bloomington
743 Whetsell, L. E., Whetsel San., Bloomington
740 Wiltshire, J. W., 1st Nat'l Bank, Bloomington
980 Woolery, Homer, Gentry Bldg., Bloomington

*Deceased.

MONTGOMERY COUNTY

671 Ball, T. Z., Waveland
1527 Barcus, Paul J., Crawfordsville
669 *Batman, Wm. F., Crawfordsville
2278 Beatty, James L., Crawfordsville
2199 Bounnell, Harry M., Waynetown
2602 Clements, Geo. E., Crawfordsville
1524 Cooksey, Thomas L., Crawfordsville
2198 Davidson, J. Frank, Crawfordsville
2274 Dennis, Fred A., Crawfordsville
1529 Etter, Jacob R., Crawfordsville
2276 Ewell, Wardlaw, Crawfordsville
2500 Faulkner, Albert S., Waynetown
1528 Gott, W. T., Crawfordsville
2255 Green, Henry E., Crawfordsville
2448 Griffith, J. B., Alamo
2275 Griffith, Thos. J., Crawfordsville
2597 Howard, Chester W., Crawfordsville
2197 Hutchings, B. F., Crawfordsville
674 Lidikay, E. C., Ladoga
673 Loop, A. L., Crawfordsville
2279 Peacock, N. F., Darlington
2257 Peacock, S. R., Ladoga
2375 Pollom, Robert R., Darlington
672 Ristine, W. H., Crawfordsville
2277 Satterlee, A. R., Crawfordsville
2256 Schenck, Faye O., Crawfordsville
1526 Sigmond, Harvey W., Crawfordsville
2426 Swope, Austin A., Crawfordsville
670 Williams, Geo. T., Crawfordsville
1525 Wolfe, J. P., Crawfordsville

MORGAN COUNTY

1847 Bothwell, C. G., Martinsville
2595 Bradley, John S., Hall
2599 Egbert, Robert H., Martinsville
1851 *Green, E. V., Martinsville
2352 Robinson, Frank C., Martinsville
1850 Robinson, H. C., Martinsville
1848 Sandy, W. J., Martinsville
2180 Seaton, G. W., 620 Bankers Trust, Indianapolis
2559 Spoor, J. S., Brooklyn
1846 Swan, D. H., Paragon
1849 Sweet, E. M., Martinsville
2283 Thompson, Wm. L., Mooresville
2502 White, Claude H., Mooresville
2409 Whiting, U. G., Martinsville

NOBLE COUNTY

1544 Black, Frank W., Ligonier
1540 Carver, Walter F., Albion
1546 Gardner, C. A., Kendallville
1551 Gilbert, Joseph L., Kendallville
1537 Goodwin, Columbus B., Kendallville
1543 Hardy, Chas. F., Albion
1541 Hayes, John W., Albion
1542 Hayes, Woodard H., Ligonier
1548 Hursey, Virgil G., Ligonier
1552 Lane, C. D., Kendallville
2571 Lawson, I. H., Wolf Lake
1547 Luckey, James E., Albion
1538 Morr, John W., Kendallville
1545 Munk, C. E., Cromwell
1549 Nye, John H., Rome City
1550 Pulskamp, B., Albion
1536 Ravenscroft, John H., Wawaka
1724 Seymours, Calvin A., Ligonier
1953 Shobe, Wm. A., Avilla
1604 Veazey, Wm. M., Kendallville
1539 Williams, H. O.,

ORANGE COUNTY

439 Arthur, F. D., West Baden
434 Baker, R. E., Orleans
430 Boyd, C. E., West Baden
442 Colglazier, G. G., Leipsic
431 Dillinger, J. R., 32 N. 36th St., Philadelphia, Pa.
1748 Hammond, F. E., French Lick
437 Hassenmiller, M., West Baden
428 Hoggatt, W. W., French Lick
433 Holaday, R. L., Paoli
429 Lindley, Laban, Paoli
435 Maris, J. I., Paoli
427 Miller, H. L., West Baden
2127 Mowry, Wm. A., 2158 Grandin Rd., Cincinnati, O.
441 Patton, W. H., Orleans
2565 Sicks, O. Wilbur, French Lick
438 Sloan, W. W., French Lick
432 Stewart, O. H., Orleans
436 Teaford, S. F., Paoli
440 Wilson, D. S., French Lick
2253 Workman, Wm. S., Orleans

OWEN COUNTY

450 Dutton, H. H., Spencer
449 Gray, O. F., Spencer
2266 Hazel, Jas. T., Freedom
4 Kennedy, A. C., Patricksburg
2416 McLure, Robert L., Gosport
1415 McQueen, Wm., Oaklandon

6 Pierson, Allen ..... Spencer
448 Sloan, J. N. ..... Spencer
451 Stevens, J. V. ..... Spencer
5 Williams, F. A. ..... Quincy
452 Yocum, Boaz ..... Coal City

PARKE-VERMILLION COUNTIES

180 Bloomer, J. R. ..... Rockville
1642 Caplinger, Chas. A. ..... Wallace
177 Collings, T. J. ..... Rockville
181 Connelly, J. J. ..... Rockville
2605 Darrock, S. C. ..... Cayuga
173 Dooley, R. L. ..... Montezuma
2324 Evans, Everett M. ..... Mecca
174 Martin, A. ..... Bellmore
176 Myers, W. C. ..... Dana
179 Noblitt, J. S. ..... Bellmore
182 Peare, R. C. ..... Rockville
2034 Rhein, A. E. ..... Rosedale
175 Sabin, Albert E. ..... Dana
183 Warren, Bradford ..... Marshall
1641 White, Chester S. ..... Rosedale
178 Williamson, A. A. ..... Marshall

PERRY COUNTY

1293 Conner, D. S. ..... Cannelton
1290 Coultas, P. J. ..... Tell City
1292 Glenn, Fred C. ..... Tell City
1288 Hargis, W. T. ..... Tell City
1286 James, N. A. ..... Tell City
2309 Lee, John H. ..... Rome
1291 Muelchi, Wm. H. ..... Tell City
1287 Schriefer, E. E. ..... Cannelton
1289 Snyder, Earl R. ..... Troy
231 Taylor, J. E. ..... Leopold

PIKE COUNTY

1919 Basinger, T. W. ..... Petersburg
1922 Bethel, Wm. J. ..... Winslow
2325 Byers, O. A. ..... Petersburg
1925 Clark, S. R. ..... Petersburg
2327 Corn, Nathaniel ..... Velpen
2540 DeTar, Geo. B. ..... Winslow
1923 Goodwin, L. D. ..... Winslow
1917 Hunter, Walter M. ..... Petersburg
1924 Imel, Edward S. ..... Ft. Bayard, N. M.
1918 Kime, John T. ..... Petersburg
1921 Logan, A. R. ..... Petersburg
2328 McGlasson, T. D. ..... Winslow
1920 Rice, T. R. ..... Petersburg
2326 Taylor, Daniel E. ..... Velpen

PORTER COUNTY

1656 Axe, Ross A. ..... Chesterton
1650 Blount, R. D. ..... Valparaiso
1651 Cook, H. S. ..... Valparaiso
1649 DeWitt, C. H. ..... Valparaiso
1647 Dittmer, Samuel E. ..... Kouts
1653 Dobbins, A. O. ..... Wheeler
1644 Douglas, Geo. R. ..... Valparaiso
1654 Fyfe, M. B. ..... Valparaiso
1646 Gowland, H. E. ..... Valparaiso
1655 Hayward, Harry B. ..... Valparaiso
2263 Kleinman, F. ..... Hebron
2264 Leatherman, Anderson P. ..... Valparaiso
1652 Noland, P. D. ..... Kouts
1645 Powell, E. H. ..... Valparaiso
2265 Ryan, John A. ..... Valparaiso
1648 Seipel, H. O. ..... Valparaiso
1643 Stoner, G. H. ..... Valparaiso
2262 Wiltfong, Chas. O. ..... Chesterton

POSEY COUNTY

1369 Arburn, Chas. ..... Wadesville
2499 Doerr, John E. ..... Mt. Vernon
2531 Fitzgerald, Kelly C. ..... New Harmony
1725 Fullenwider, C. H. ..... Mt. Vernon
1854 Gudgel, J. E. ..... Cynthiana
1726 Hardwick, R. L. ..... Mt. Vernon
1518 Miller, Wm. L. ..... Wadesville
1519 Montgomery, S. B. ..... Cynthiana
2532 Ramsey, Douglas C. ..... New Haven, Ill.
1370 Ranes, J. R. ..... Mt. Vernon
1390 Rawlings, C. L. ..... New Harmony
1904 Turman, Ira L. ..... Cynthiana
1391 Wilson, Thomas W. ..... New Harmony
1520 Woods, Arba L. ..... Poseyville

PULASKI COUNTY

18 Campbell, C. S. ..... Winamac
19 Campbell, G. W. ..... Winamac
21 Carneal, Thomas E. ..... Winamac
2364 Ives, Raymond J. ..... Francesville
22 Johnston, E. E. ..... Star City
23 Kelsey, A. J. ..... Monterey
2560 Linton, Chas. E. ..... Medaryville
17 Thompson, G. W. ..... Winamac
20 Thompson, W. H. ..... Winamac
16 Washburn, G. W. ..... Star City

PUTNAM COUNTY

1730 Collins, Clement C. ..... Roachdale
1732 Conn, Wm. D. ..... Bainbridge
2299 *Cully, John F. ..... Bainbridge

693 Gillespie, J. F. ..... Greencastle
694 Hawkins, E. ..... Greencastle
692 Hope, C. F. ..... Greencastle
1596 Horn, Amos H. ..... Putnamville
1731 Hurst, E. M. ..... Cloverdale
696 Hutcheson, W. R. ..... Greencastle
697 Lemon, B. E. ..... Fillmore
701 McGaughey, W. M. ..... Greencastle
698 Moser, W. A. ..... Coatsville
1853 New, Y. N. ..... Roachdale
1595 Preston, Jos. L. ..... Cloverdale
1733 Stroube, Chas. N. ..... Roachdale
700 Tucker, C. C. ..... Greencastle
695 Tucker, W. W. ..... Greencastle
691 Wood, N. S. ..... Greencastle
1852 Wright, U. A. ..... Coatsville
699 Zaring, C. T. ..... Greencastle

RANDOLPH COUNTY

111 Botkins, Chas. L. ..... Farmland
108 Brenner, Ivan E. ..... Winchester
2442 Brooks, Emory W. ..... Farmland
101 Chenoweth, F. A. ..... Winchester
1449 Cox, Cyrus R. ..... Lynn
102 Current, O. E. ..... Farmland
105 Davis, Geo. H. ..... Union City
2529 Detrick, H. W. ..... Union City
114 Henderson, A. ..... Ridgeville
107 Hunt, B. S. ..... Winchester
2320 Kramer, J. A., 109 Terminal Bldg., Norfolk, Va.
106 Markle, Grant C. ..... Winchester
420 Martin, C. E. ..... Carlos
104 Milligan, C. E. ..... Winchester
116 Mullikin, C. W. ..... Ridgeville
109 Moroney, J. H. ..... Winchester
172 Nixon, John ..... Farmland
113 Reid, Robert Wm. ..... Union City
112 Reynard, E. G. ..... Union City
688 Rine, E. W. ..... Winchester
117 Robison, J. S. ..... Winchester
1335 Rogers, A. C. ..... Parker
103 Ruby, Fred McK. ..... Union City
1603 Spitler, Chas. E. ..... Saratoga
115 Wallace, John M. ..... Lynn
110 Zeller, F. Arthur ..... Union City

RIPLEY COUNTY

1939 Coomes, M. Jos ..... Versailles
1816 Cox, Lafayette T. ..... Osgood
1814 Freeman, Edward D. ..... Osgood
1815 Hess, John N. ..... New Marion
2561 Holton, C. E. ..... Holton
1813 McClure, Jesse R. ..... Milan
1817 *Olmstead, R. T. ..... Versailles
2450 Pate, J. R. ..... Milan
2488 Whitlatch, Bine ..... Milan
2489 Whitlatch, Irving A. ..... Milan
2194 Wilson, Florence O. ..... Versailles

RUSH COUNTY

952 Bowen, J. F. ..... Rushville
962 Green, F. H. ..... Rushville
949 Green, L. M. ..... Rushville
1439 Hackleman, Frank G. ..... Rushville
957 Hume, E. L. ..... Milroy
950 Kennedy, R. O. ..... Rushville
958 Lampton, W. T. ..... Milroy
951 Lee, J. M. ..... Rushville
954 Logan, H. V. ..... Rushville
2122 Metcalf, Henry P. ..... New Salem
963 Paxton, J. T. ..... Rushville
961 Sexton, J. C. ..... Rushville
953 Sexton, M. C. ..... Rushville
960 Smith, Wm. C. ..... Rushville
959 Smuller, C. L. ..... Mays
956 Van Osdol, D. D. ..... Rushville
955 Wooden, E. I. ..... Rushville

SAINT JOSEPH COUNTY

939 Abel, J. A., 122 W. Division St. ..... South Bend
903 Allen, G. B., 308 J.M.S. Bldg. ..... South Bend
1474 Baer, Samuel W., J.M.S. Bldg. ..... South Bend
929 Baker, W. H., 122 N. Lafayette St., South Bend
2536 Bartlett, Clifford L., R. R. 2 ..... Mishawaka
2501 Bartlett, F. Herbert, Healthwin Hospital, South Bend
926 Berteling, J. B., W. Colfax Ave., South Bend
1473 Boone, John C., Dean Bldg. ..... South Bend
1468 Borley, Edgar R., 404 J.M.S. Bldg., South Bend
1475 Borley, W. E., 118 N. Church St., Mishawaka
904 Bosenbury, C. S., 111 N. Lafayette, South Bend
930 Bostwick, J. G., 117 S. Main St. ..... Mishawaka
891 Boyd-Snee, H., 514 J.M.S. Bldg. ..... South Bend
911 Bussard, C. F., 536 Farmers Trust, South Bend
914 Christophel, W. B., 109 W. Third St., Mishawaka
910 Clapp, Fred R., 122 N. Lafayette St., South Bend
901 Clark, S. A., 314 J.M.S. Bldg. ..... South Bend
1479 Cook, Wm. M., Citizens Trust Bldg., South Bend
1480 Cooper, Harry L., Farmers Trust, South Bend
918 Crowe, H. M., W. Colfax Ave. ..... South Bend
931 Crumpacker, C. B., Farmers Trust, South Bend
1487 DeForrest, Daniel F., Dean Bldg. ..... South Bend

*Deceased.

933 Denaut, M. S.....Walkerton
900 Dresch, C. A., 118 S. Mill St.....South Bend
932 Dugdale, R. B., 305 W. Jefferson, South Bend
1472 Dugdale, Thomas A., 117 Mills Bldg., Mishawaka
1470 Duggan, James A., 315 Union Bldg., South Bend
1484 Eastman, Fred P., 330 S. Main St., South Bend
898 Eisenbeiss, C. M., 613 J.M.S. Bldg., South Bend
927 Farnham, W. C., 304 Citizens Bank, South Bend
915 Fears, J. H., 116 S. Williams St., South Bend
895 Fish, C. M., 135 S. Lafayette St., South Bend
943 Gammack, A. P. F., Dean Bldg.....South Bend
897 Geisler, Geo. J., 303 Dean Bldg.....South Bend
1489 Graham, Henry J.....Mishawaka
892 Gorden, J. M., 724 J.M.S. Bldg.....South Bend
1466 Hager, Walter A., 111 N. Lafayette, South Bend
894 Hall, H. M.....New Carlisle
925 Hardy, John J.....North Liberty
899 Helman, H. W., 133 S. Lafayette St., South Bend
921 Hill, J. W., 136 N. Lafayette St.....South Bend
1467 Hillman, W. H., 513 Farmers Trust, South Bend
934 Huffman, A. D., 127 S. Lafayette St., South Bend
936 Hutchinson, B. M., Mills Blvd.....Mishawaka
1482 Knapp, Arthur L., 248 Farm. Trust, South Bend
909 Kramer, A. A., 1519 S. Miami St., South Bend
918 Lent, E. J., 122 N. Lafayette St., South Bend
941 Lindquist, N. S., 401 Farm. Trust, South Bend
912 Lyon, Martha B., 214 LaPorte Ave., South Bend
908 Lyon, M. W., Jr., 122 N. Lafayette, South Bend
1476 McMeel, James E., 415 Farmers Tr., South Bend
2439 Mikesch, Wm. H., 322 Farmers Tr., South Bend
1477 Miller, Hugh M., 122 N. Lafayette, South Bend
920 Miller, M. K., 122 N. Lafayette St., South Bend
907 Miranda, W. F.....Walkerton
938 Mitchell, H. F., 132 N. Lafayette, South Bend
1483 Montgomery, Hugh T., Dean Bldg., South Bend
935 Moore, E. P., 129 W. Colfax Ave., South Bend
1488 Myers, C. H., 127 N. Lafayette St., South Bend
1465 Myers, Edgar H., 127 S. Lafayette, South Bend
919 Olney, T. A., 415 Farmers Trust, South Bend
893 Owen, W. L., 509 Farmers Trust, South Bend
1471 Parker, Edward E., Farmers Trust, South Bend
1600 Pelz, M. D., 302 S. Michigan St.....South Bend
937 Preston, H. C., 303 W. Jeff. Blvd., South Bend
1490 Proutfit, Lewis.....Osceola
928 Sandock, Isadore, 436 Farm. Trust, South Bend
1486 Savery, C. E., 126 N. Lafayette St., South Bend
917 Sensenich, R. L., 205 J.M.S. Bldg., South Bend
905 Shanklin, R. C., 316 Union Trust, South Bend
2111 Shedd, Hugh B.....New Carlisle
1599 Sparks, A. J., 304 S. Michigan Ave., South Bend
1481 Sprague, John S., 415 Dean Bldg., South Bend
1598 Squires, David E., 307 Citizens Bank, South Bend
924 Stoltz, Charles, 311 W. Jeff. Blvd., South Bend
1485 Swantz, Thos. J., 424 Farm. Trust, South Bend
940 Terry, C. C., 122 N. Lafayette St., South Bend
916 Travers, P. C., 542 Farmers Trust, South Bend
1464 Van Rie, Leo P., 315 S. Taylor St., Mishawaka
906 Varier, J. A., 135 S. Lafayette St., South Bend
942 Vickery, Chas. R., 310 J.M.S. Bldg., South Bend
1478 Vitou, Henry E., 739 S. Michigan, South Bend
1469 Von Barandy, Oscar, 402 S. Chapin, South Bend
896 Wegner, W. G., 307 Un. Trust Bldg., South Bend
902 Wickam, W. A., 507 J.M.S. Bldg., South Bend
923 Wilson, J. L., Farmers Trust Bldg., South Bend
922 Wyland, B. J., 517 N. Main St.....Mishawaka

SCOTT COUNTY

537 McLain, W. L.....Scottsburg
539 Walker, J. H.....Scottsburg
538 Wilson, J. P.....Scottsburg

SHELBY COUNTY

1934 Bass, Frank E.....Shelbyville
567 Carter, Laura.....Shelbyville
572 Coulson, S. B.....Waldron
568 Green, Thomas G.....Shelbyville
569 Keeling, J. E.....Waldron
565 Kennedy, S.....Shelbyville
1392 McFaddin, Walter C.....Shelbyville
2376 Patton, Vernon C.....Morristown
566 Parrish, J. W.....Shelbyville
2052 Perry, Chas. H.....Lewis Creek
571 Randolph, D. F., 809 N. Alabama, Indianapolis
1442 Ray, Franklin E.....Shelbyville
2140 Sammons, Leslie C.....Shelbyville
1933 Schooley, W. C.....Waldron
570 Snider, J. W.....Fairland

SPENCER COUNTY

857 Atchison, K. C.....Rockport
847 Buxton, Eva J.....Rockport
849 Ehrman, C. D.....Rockport
851 Glackman, J. C.....Rockport
852 Gwaltney, S. P.....Lake
848 Harter, H. T.....Newtonville
856 Lang, S. C.....Rockport
853 Lomax, Claude C.....St. Meinrad
850 Medcalf, N. L.....Lamar
854 Schweizer, J. J.....Santa Claus
859 Stuteville, S. W.....Grandview
855 Thompson, A. B.....Lake
858 Williams, W. H.....Dale

STEUBEN COUNTY

869 Blosser, B. A.....Fremont
2113 Cameron, Don Franklin.....Hamilton
1729 Cameron, J. F.....Hamilton
862 Creel, T. J.....Angola
865 Frazier, S. S.....Angola
864 Humphreys, F. B.....Angola
860 Kimmel, A. J.....Hudson
1728 Lake, Geo. N.....Pleasant Lake
866 Lane, W. H.....Angola
867 Nichols, H. A.....Angola
863 Ritter, Mary T.....Angola
1727 Sutherland, P. Norman.....Angola
861 Swantusch, O. H.....Angola
1513 Wade, Robert L.....Fremont
868 Waller, W. F.....Angola
2269 Wood, T. F.....Angola

SULLIVAN COUNTY

67 Asbury, C. W.....Hymera
75 Bailey, W. A.....Carlisle
2298 Bedwell, T. S.....Dugger
65 Billman, B. I.....Sullivan
71 Billman, J. M.....Sullivan
2074 Bland, H. E.....Fairbanks
73 *Boone, F. C.....Merom
64 Briggs, C. F.....Sullivan
1448 Corbin, E. M.....Sullivan
63 Crowder, J. R.....Sullivan
2295 Deputy, W. M.....Dugger
2297 Dukes, F. M.....Dugger
2123 Freeman, Joseph.....Sullivan
2296 Gill, Ira J.....Dugger
2321 Higbee, Paul.....Dugger
2124 Lisman, J. W.....Sullivan
61 Maple, James B.....Sullivan
72 Neff, J. H.....Sullivan
2076 O'Dell, Harry.....Farmersburg
2075 Oliphant, J. T.....Farmersburg
2125 Parker, John J.....Merom
68 Pirtle, G. W.....Carlisle
2294 Robards, E. E.....Shelburn
70 Scott, G. D.....Sullivan
62 Thompson, W. N.....Sullivan
74 Thralls, C. U.....Hymera
2077 *Van Cleave, R. H.....Farmersburg
66 Walters, E. R.....Paxton
69 Whipps, C. E.....Carlisle
2437 Wrork, John H.....Shelburn

SWITZERLAND COUNTY

393 Bear, L. H.....Vevay
395 Copeland, G. W.....Vevay
394 Copeland, R. M.....Vevay
2546 Potter, Benj. S.....East Enterprise
2290 Searcy, B. N.....Patriot
396 Shadday, J. H.....Vevay
398 Thieband, H. M.....Vevay
397 Ward, J. P.....Vevay

TIPPECANOE COUNTY

982 Ackerman, A. C.....Lafayette
983 Arnett, A. C.....Lafayette
984 Bauer, A. J.....Lafayette
985 Beasley, Geo. F.....Lafayette
986 Biddle, F. M.....Battle Ground
987 Burkle, John C.....Lafayette
2310 Butler, Wm. F.....Cayuga
988 Campbell, R. M.....Lafayette
989 Chenoweth, O. U.....Lafayette
990 Coyner, A. B.....Lafayette
991 Crockett, F. S.....Lafayette
993 Davison, Carl V.....West Lafayette
992 Davidson, E. C.....Lafayette
994 Driscol, C. C.....Lafayette
996 Griest, O. E.....Lafayette
997 Hannell, R. V.....Lafayette
998 Hillis, James D.....Lafayette
999 Hiner, F. T.....West Lafayette
1000 Hunter, Frank P.....Lafayette
1001 Hupe, Charles.....Lafayette
1002 Ikins, Roy G.....Lafayette
1003 Keiper, Geo. F.....Lafayette
1004 Kern, Chas. B.....Lafayette
1005 Lairy, M. M.....Lafayette
1006 Laws, H. J.....Lafayette
1007 Lee, Geo. W., 3443 Lyleburn Pl., Cincinnati, Ohio
1008 Levering, Guy P.....Lafayette
1009 Loop, F. A.....Lafayette
1010 McBride, Wm. F.....Dayton
1011 McCay, Ora L.....Romney
1012 McClelland, D. C.....Lafayette
1013 McMahan, Adah.....Lafayette
1014 Mitchell, E. T.....Lafayette
1016 Moffitt, Wm. R.....West Lafayette
995 Moore, Wm. H. H.....West Lafayette
1015 Morgan, A. E.....Lafayette
1017 Morrison, J. S.....Lafayette
1521 Mugg, Henry W.....Clarks Hill
1018 Pearlman, S. S.....Lafayette
1019 Pyke, F. L.....Lafayette

sed.

1020 Reser, Wm. M.....Lafayette
1021 Romberger, F. T.....Lafayette
2254 Rowland, C. L.....West Point
1022 Ruschli, E. B.....Lafayette
1023 Schaible, E.....Lafayette
1024 Schreiber, Adam Wm.....Lafayette
1025 Shafer, J. W.....Lafayette
1026 Sweezey, H. N.....Lafayette
1027 Tea, Roger S.....Lafayette
1028 Terry, O. P.....Lafayette
1029 Thomas, G. A.....Lafayette
1030 Thompson, F. B.....Lafayette
1031 Throckmorton, G. K.....Lafayette
1032 Tubbs, Geo. R.....Lafayette
1033 Van Reed, Earl.....Lafayette
1034 Wagoner, R. H.....Lafayette
1035 Westfall, A. B.....Lafayette
1036 Wetherill, R. B.....Lafayette
1037 Wilson, Milton C.....Lafayette
1522 Wray, Curtis M.....New Richmond

TIPTON COUNTY

270 Burkhardt, A. E.....Tipton
1456 Chance, B. V.....Windfall
1377 Cooper, John W.....Kempton
557 Cotton, S. M.....Goldsmith
2497 Davis, Ed. C.....Windfall
1376 Dunham, W. E.....Kempton
271 Furney, W. C.....Sharpsville
556 Gifford, H. S.....Tipton
559 Grishaw, H. E.....Tipton
1457 Hinkle, E. I.....Goldsmith
1374 Huron, W. B.....Tipton
269 Longfellow, T. W.....Martinsville
272 Marshall, R. E.....Curtisville
1373 Moser, E. B.....Windfall
1459 Newcomer, Martin V. B.....Tipton
1375 Read, H. G.....Tipton
274 Reagan, L. M.....Tipton
1372 Recobs, Robert M.....Tipton
558 Shoup, H. B.....Sharpsville
1458 Tressider, J. T.....Tipton
273 Warne, G. H.....Tipton

UNION COUNTY

544 Beard, E. R.....Liberty
542 Closson, J. C.....Liberty
540 Dubois, F. T.....Liberty
543 Hawley, W. H.....College Corner, O.
545 Pigman, Garrett.....Liberty
546 Schonwald, J. D.....College Corner, O.
541 Thompson, W. A.....Liberty

VANDERBURGH COUNTY

2493 Bacon, Chas. P., 921 Upper 2d St., Evansville
2233 Baker, C. S., Walker Hospital.....Evansville
2593 Baker, H. M., Old State Bank Bldg., Evansville
121 Barnes, Wm. E., 702 E. Columbia St., Evansville
148 Begley, Baxter.....Inglefield
2601 Braclay, I. C., Walker Hospital.....Evansville
138 Bradley, C. W., Boehne Bldg.....Evansville
2041 Brose, L. D., 1st and Walnut Sts., Evansville
2694 Bryan, Tony L., 516 Walnut St.....Evansville
382 Burkholder, H. J., Intermed. Bldg., Evansville
128 Busse, E. P., 420 Upper 1st St.....Evansville
2318 Cain, D. B., North Side Bank.....Evansville
2592 Cleveland, W. R., Intermediate Bldg., Evansville
161 Clippinger, W. F., R. R. 4.....Evansville
133 Coleman, W. H., 722 Fulton Ave.....Evansville
152 Combs, P. B., Boehne Bldg.....Evansville
135 Conover, Earl, 410 Upper 2nd St.....Evansville
2214 Cottingham, I. E., Intermed. Bldg., Evansville
2042 Davidson, W. R., Walker Hospital.....Evansville
2039 Dome, H. S., 406 E. Cal. St.....Evansville
155 Dyer, W. C., Intermediate Bldg.....Evansville
390 Ehrich, Wm. S., Citizens Bank Bldg., Evansville
389 Eichel, Sidney J., Cit. Bank Bldg., Evansville
159 Field, Wm. H., 1st and Walnut Sts., Evansville
124 Floyd, B. L., Intermediate Bldg.....Evansville
2490 Fritsch, L. E., 1111 E. Franklin St., Evansville
391 Garrison, H. M., Grant and Green, Evansville
146 Goble, D. S., 234 Kentucky St.....Evansville
119 Hare, J. H., Boehne Bldg.....Evansville
2607 Harpole, C. B., 407½ N. 2nd St.....Evansville
2317 Hartley, C. A., Wood Bldg.....Evansville
122 Hartlon, Chas., Intermediate Bldg., Evansville
2040 Hayden, A. M., 1st and Walnut Sts., Evansville
385 Heberer, J. M., 1013 Powell Ave.....Evansville
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749 Asbury, W. D., Rose Disp. Bldg., Terre Haute
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1773 Bethea, D. A., 1326 Wabash Ave., Terre Haute
751 Bernheimer, H. L., Naylor-Cox Bdg., Terre Haute
1758 Bohn, J. C.....Tacoma, Wash.
760 Bopp, H. W., Citizens Trust Bldg., Terre Haute
1772 Brunker, James W.....Riley
1295 Caffee, Amos H., Rose Disp. Bldg., Terre Haute
767 Carmichael, C. S.....Seelyville
1498 Carpenter, Geo. C., 334 S. 13th St., Terre Haute
1409 Casebeer, I. M.....Clinton
756 Casey, Otto.....Clinton
1812 Chambers, C. L.....Des Moines, Iowa
768 Combs, Chas. N., 221 S. Sixth St., Terre Haute
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763 Forsyth, D. H., 634½ Wabash Ave., Terre Haute
1943 Freed, J. E., 954 Lafayette Ave., Terre Haute
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776 McBride, E. C., 10 N. Seventeenth, Terre Haute
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* Deceased.

779 McCarthy, F. G., Tribune Bldg.....Terre Haute
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805 Miller, D. B., 1230 S. 17th St.....Terre Haute
804 Miller, D. T., Trust Bldg.....Terre Haute
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1297 Moorehead, Thos. W., Hippodrome, Terre Haute
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790 Thompson, G. J., 683½ Wabash, Terre Haute
791 Ulmer, D. R., McKeen Bldg.....Terre Haute
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2603 Willien, W. F., Rose Disp. Bldg., Terre Haute
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308 Beaman, Z. M.....North Manchester
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295 Browne, F. S.....LaFontaine
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505 Domer, Walter.....Wabash
305 Elliott, Geo. W.....Wabash
300 Hale, N. T.....Wabash
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297 Jewett, L. E.....Wabash
304 Jordan, M. F.....Wabash
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309 Kitson, F. S.....North Manchester
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299 Moore, P. G.....Wabash
296 Pearson, E. D.....Wabash
310 Perry, Ira E.....North Manchester
454 Renner, M. E.....Lagro
1954 Rogers, Earl A.....Somerset
298 Sholty, L. O.....Wabash
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316 Siegmund, E. J.....Wabash
306 Smith, L. W.....Wabash
2272 Stewart, John W. G.....Wabash
294 Thompson, N. H.....Wabash
315 Thorpe, B. B.....Roann
307 Warvel, J. L.....North Manchester
303 Whisler, F. M.....Wabash
317 Wilson, J. D.....Laketon
301 Wilson, James.....Wabash

WARRICK COUNTY

1308 Ford, Wm. P.....Boonville
1306 Hoover, J. G.....Boonville
2285 Hoover, P. N.....Boonville
1304 Kister, G. H., 1820 Main St.....Evansville
1307 Samples, John T.....Boonville
2284 Spradley, N. M.....Boonville
2286 Wilhelmus, Chas. M.....Newburg
1309 Wilson, Dalton, Walker Hospital.....Evansville
1305 Wilson, P. E.....Boonville
2288 Wilson, Wesley.....Newburg
2287 Youngblood, E. L.....Boonville
1310 Zimmerman, J.....Lynnville

WASHINGTON COUNTY

2436 *Cook, W. H.....Livonia
2392 Green, Wm. L.....Pekin
2390 Huckleberry, Irvin E.....Salem
2434 Kelly, James F.....Salem
2391 May, Frank A.....Hardinsburg
2393 Meade, Ernest C.....Livonia
2387 Mitchell, John I.....Salem
2394 Mull, Phillip L., 101 W. Chestnut, Louisville, Ky.
2432 Murphy, Chas. W.....Salem
2389 Paynter, Claude B.....Salem
2388 Paynter, Lawrence W.....Salem
2433 Roberts, Samuel A.....Salem
2435 Robertson, A, N.....Campbellsburg

WAYNE COUNTY

885 Blossom, J. C.....Richmond
887 Bond, Chas. S., 112 N. Tenth St.....Richmond
56 Boyd, H. B.....Cambridge City
889 Buche, F. P., 106 S. 7th St.....Richmond
2537 Bulla, Mora S., 32 S. 9th St.....Richmond
218 Churchell, E. R., 2nd Nat'l Bank Bldg., Richmond
216 Davis, T. H., 21 S. 8th St.....Richmond
1438 Deardorff, Oliver M.....Hagerstown
55 Denny, E. C.....Milton
2261 Fackler, V. N.....Dublin
2373 Fisher, Wm. T.....Fort Strong, Mass.
2030 Ford, O. P. M.....Centerville
2032 Fouts, John M., 48 S. 7th St.....Richmond
2355 Gentle, Luke M., 52 S. 8th St.....Richmond
53 Griffin, V. C., 23 S. 8th St.....Richmond
59 Hagie, F. E., 218 N. 13th St.....Richmond
2260 Hays, Geo. R., 2nd Nat'l Bank Bldg., Richmond
54 Holland, E. E., Kelly Bldg.....Richmond
881 Huff, O. N.....Fountain City
219 Hunt, Geo. B., 201 N. 7th St.....Richmond
57 Johnston, M. F., 103 N. 10th St.....Richmond
880 King, J. E., 24 S. 9th St.....Richmond
886 Krueger, F. W., 45 S. 7th St.....Richmond
2307 Littell, W. R.....Cambridge City
884 Markley, S. C., 34 S. 7th St.....Richmond
60 Marvel, Charles, 127 N. 10th St.....Richmond
2354 McKee, Chas. E.....Dublin
882 Misener, W. L., 200 N. 8th St.....Richmond
1383 Morrow, Sarah J., 27 N. 7th St.....Richmond
890 Pierce, R. J., 30 S. 10th St.....Richmond
888 Ross, L. F., Nat'l Bank Bldg.....Richmond
2541 Schillinger, Richard, 118 N. 8th St.....Richmond
2259 Smith, S. E., Easthaven Hospital.....Richmond
2356 Squier, W. C., Glen Miller Sanitarium, Richmond
52 Study, J. N.....Cambridge City
2306 Wampler, John M.....Richmond
883 Whallon, A. J., 29 S. 10th St.....Richmond
2258 Wickens, Mary, Easthaven Hospital.....Richmond
58 Wisener, G. H., 127 N. 10th St.....Richmond
217 Wright, J. E.....Cambridge City
2031 Yencer, M. W., 22 N. 14th St.....Richmond

WELLS COUNTY

1796 Brickley, Harry D.....Bluffton
1802 Brown, A. W.....Bluffton
1809 Blue, C. L.....Tocsin
1799 Cook, L, H.....Bluffton
1804 Dickerson, F. M.....Bluffton
1810 Dyer, Edwin M.....Ossian
1800 Garrett, Frank W.....Liberty Center
1801 Goodin, Samuel A.....Uniondale
1805 Harris, B. W.....Uniondale
1806 Hatfield, I. N.....Bluffton
1952 Huffman, David C.....Poneto
2119 McBride, J. L.....Zanesville
1793 McKean, Thomas J.....Monroe
1807 McKinney, J. W.....Bluffton
1797 Mead, C. H.....Bluffton
1794 Metts, Fred A.....Bluffton
1808 Morris, Geo. B.....Monroe
1795 Redding, J. L.....Bluffton
1951 Reynolds, F. M.....Montpelier
1798 Severin, Louis.....Bluffton
1803 Shoemaker, Samuel A.....Bluffton
1811 Wybourn, David Chas.....Ossian

WHITE COUNTY

1419 Clayton, Geo. R.....Monon
1422 Coffin, Guy R.....Monticello
1421 Didlake, M. T.....Monticello
1423 Gable, Homer B.....Monticello
1417 Galbreath, J. P.....Burnetts Creek
1440 Gossett, Wm. O.....Brookston
1420 McBeth, Walter.....Burnetts Creek
1441 Netherton, C. R.....Chalmers
1416 Reagan, R. M.....Monon
1418 Spencer, Wm. A.....Wolcott
1605 Wells, G. M.....Chalmers

WHITLEY COUNTY

1587 Briggs, Jesse H.....Churubusco
1586 Eberhard, Fred G.....South Whitley
161 Egolf, H. M.....Columbia City
1583 Franks, Otto P.....Churubusco
164 Grisier, F. G.....Columbia City
1590 Grisier, Otto W., Lt. M.C., U.S.N., Marine Barrack.....Vallejo, Calif.
1585 Hart, Bruce D.....South Whitley
2311 Hershey, E. A.....Churubusco
166 Kithcart, N. I.....Columbia City
162 Linvill, D. S.....Columbia City
168 Lutes, D. L.....R. F. D, Columbia City
1582 Nolt, Ernest V.....Columbia City
165 Pence, B. L.....Columbia City
167 Schuman, O. V.....Columbia City
1588 Scott, James Wm.....R. F. D, Columbia City
1584 Sowers, J. H.....South Whitley
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* Deceased.

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ORIGINAL ARTICLES

BACTERIA RECOVERED POSTMORTEM WITH SPECIAL REFERENCE TO SELECTIVE LOCALIZATION AND FOCAL INFECTION

PRELIMINARY REPORT*

ARLIE R. BARNES, M.D.
FELLOW IN MEDICINE,
THE MAYO FOUNDATION

and

ALFRED S. GIORDANO, M.D.
FELLOW IN PATHOLOGY, THE MAYO FOUNDATION,
FIRST ASSISTANT IN SECTION ON PATHOLOGIC ANATOMY, THE MAYO CLINIC,
ROCHESTER, MINNESOTA

Hippocrates mentioned that abscess of the ear and necrosis of the jaw may be due to infected teeth. More than one hundred years ago Benjamin Rush advanced the opinion that decayed teeth "were the unsuspected cause of general diseases", and reported a case of rheumatism of the hip-joint cured by the extraction of a decayed tooth. The importance of the relation of foci of infection to general diseases is conveyed by the fact that Evans cites thirty-eight acute and eleven chronic diseases which today are considered focal in origin.

Meisser and Rosenow, working in the Mayo Foundation, have reproduced perfectly in dogs the conditions of focal infection as they probably occur in man. They removed in a sterile manner the pulps from two teeth of each of four dogs and infected the pulp chambers with bacteria from the tonsils of a patient with focal nephritis. The pulp chambers were then sealed with amalgam and the animals allowed to live three months. These organisms localized in the kidneys of each of the four dogs, producing focal and diffuse lesions, the varying ages of which indicated that the kidneys had sustained a series of successive or continuous invasions by bacteria.

Experimental evidence to explain the probable *modus operandi* of focal infection has been accumulating. Forssner, using streptococci that did not show specific pathogenicity for the kidney, cultured them in kidney tissue and kidney extract, after which they developed special affinity for kidney tissue when injected intravenously into animals. Rosenow, while studying the transmutations within the streptococcus-pneumococcus groups, noted that as avirulent strains were passed through animals they acquired increasing virulence and exhibited a selective affinity for certain tissues. Thus it occurred to him that a similar mechanism might obtain in diseases focal in origin. For example, only a streptococcus low in the scale of virulence was found capable of producing chronic infectious endocarditis, while this same organism with its virulence increased by repeated subculture was capable of producing malignant endocarditis!

What determines the specific invasive powers of an organism is not clear. Evans points out that the *Treponema pallidum* may invade the uninjured mucous membrane of the lip and that the gonococcus may invade the mucous membrane of the conjunctivæ, while these structures are peculiarly resistant to invasion by other organisms, indicating that certain organisms have specific invasive powers. Evans believes that tissues with intrinsically poor blood supply are favorable to localization since the low supply of food and oxygen allows bacteria of low virulence but highly sensitive to oxygen to obtain a foothold. Rosenow believes that in regions of low blood supply a gradation of available oxygen affords optimum conditions for the growth of bacteria.

Dissemination of bacteria from foci of infection occurs by way of the lymphatics or the blood stream. Experimental evidence indicates that the latter is the most frequent avenue of infection and that the invasion is embolic in character!

In a bacteriologic study of 213 cases at necropsy we came to the conclusion that bacteria recovered postmortem have definite intravital significance and if the invasion occurs after death it very rarely, at least, occurs within the period after death covered by our studies. We

*Presented before the Medical Section of the Indiana State Medical Association, Indianapolis, September, 1921.

decided to determine whether these organisms possessed the same power of specific localization as those recovered before death. Certain teeth incriminated by ante mortem examination were available for careful study and were cultured. The organisms recovered were injected into experimental animals. In certain other cases the selective action of bacteria not recovered from foci was tested. The morbid conditions studied included nephritis, gastric ulcer, tuberculous meningitis, and peritonitis. Case 342540 is illustrative of the results.

Case 342540. Mr. V. S., aged sixty-eight years, came to the Clinic complaining of involuntary and frequent urination. Urinary symptoms had developed five years before, and symptoms of duodenal ulcer had been present intermittently for twenty years. Cystostomy was performed as a diagnostic measure; epithelioma of the bladder was found and a hopeless prognosis given. The anatomic diagnosis at necropsy included a perforated gastric ulcer, duodenal ulcer, old healed duodenal ulcer, marked dental caries and sepsis, suppurative cysto-ureteropyelonephritis, with focal abscesses of both kidneys, and epithelioma of the bladder.

Six teeth were removed aseptically, around two of which there was periapical infection and around two granulomata. From the apices of the teeth staphylococci and streptococci were cultered. Diplostreptococci were found in the smear and culture from the granulomatous material. From the kidney the culture yielded chiefly colon bacilli and a few chains of streptococci. Rabbits were injected with glucose-brain-broth cultures of infected tooth apices, others with a normal saline suspension of periapical pus, and still others with a glucose-brain-broth culture of the patient's kidney. Table 1 shows the results obtained.

Besides the results presented in Table 1 injections into four other animals were made. Streptococci and staphylococci isolated from the apex of a tooth in Case 342540 when injected intravenously in Rabbits 52 and 53 produced only gastric ulcers. Colon bacilli and a few streptococci isolated from the patient's kidney when injected intravenously into Rabbits 56 and 57 proved to be very toxic and no localization was exhibited.

Attention is called to the fact that when the streptococcus was isolated from the stomach of Rabbit 54 and injected alone, gastric lesions resulted in two of three animals. When the staphylococcus was injected alone it tended to localize in the kidney and heart, producing focal

TABLE 1

RESULTS OF INJECTION OF STREPTOCOCCI AND STAPHYLOCOCCI RECOVERED POSTMORTEM IN CASE 342540

Cultures from pus from the apex of a tooth in saline suspension

- Rabbit 55 — I.....D
  - Ulcer of stomach.....2
  - Kidney 1
- Rabbit 54 — I.....D
  - Ulcer of stomach.....4
  - Streptococcus
    - Rabbit 61 — I.....D — Ulcer of stomach.....4
    - Rabbit 66 — I.....Cl. — Ulcer of stomach.....1
    - Rabbit 67 — I.....Cl. — Stomach 0
  - Staphylococcus
    - Rabbit 64 — I.....Cl. — Kidney .....4; Stomach .....1; Heart 4
    - Rabbit 65 — I.....Cl. — Kidney .....4; Stomach .....1; Heart 4

Cultures from pus from the apex of a tooth in glucose-brain-broth

- Rabbit 59 — I.....Cl.
  - Ulcer of stomach.....4
  - Kidney 4
- Rabbit 58 — I.....Cl.
  - Stomach 4 (Streptococcus)
    - Rabbit 60 — I.....D — Ulcer of stomach.....3
  - Kidney 4 (Staphylococcus)
    - Rabbit 62 — I.....Cl. — Kidney .....4; Stomach .....1; Heart 1

I.—Intravenous injection.
D.—Animal died.
Cl.—Animal chloroformed.
Degree of involvement graded on basis of 1 to 4.

abscesses, a rather characteristic behavior of this organism according to our observation when it is injected intravenously. Indeed, our observations have led us to believe that the staphylococcus does not tend to localize in the sense that the members of the streptococcus-pneumococcus group do. The staphylococcus always tends to focalize in certain structures, particularly the heart and kidney, but this occurs regardless of the source from which the organism has been isolated. This behavior of the staphylococcus is explicable on the basis of well known bacteriologic and anatomic considerations and ought not be spoken of as selective localization. This explanation does not mean that in this case the staphylococci recovered from the teeth could not be related to the renal lesions in the patient.

In our experiments in this case attention was directed to the teeth as a focus of renal infection, but we found that gastric ulcers were quite as frequently produced as renal lesions. This is significant, since gastric ulcers were found in the patient, and illustrates the value of knowing in a given case all of the lesions which can be focal in origin. It is possible that in the ante mortem study of lesions focal in origin, results which at times appear irrelevant actually have their counterpart in an unsuspected lesion of the patient.

The results of animal injections in five other cases of predominant renal lesions are tabulated in Table 2.

Reference may again be made to the gastric ulcers resulting in animals injected with organisms recovered from infected teeth in Case 342546 (Table 1). Two other cases of gastric ulcer were studied in which the teeth were definitely diseased. Organisms recovered from these foci when injected intravenously into rabbits produced gastric ulcers in three of four animals in one case and in each of two animals in the other case.

Two cases of tuberculous meningitis were studied in which there was an added pyogenic infection. From the brain in these cases diplostreptococci were cultured. These organisms were demonstrated in the brain and cord by the Gram-Weigert method of staining. When they were injected intravenously in Rabbits 80 and 82 and subdurally in Rabbits 81, 83, and 85 they exhibited selective localizing power in the central nervous system of these animals.

In control experiments we have made similar intravenous and intradural injections of pneumococci, indifferent streptococci, and hemolytic streptococci in approximately the same dosage

TABLE 2

RESULTS OF INTRAVENOUS INJECTIONS OF ORGANISMS RECOVE ED POSTMORTEM IN FIVE CASES
(Cultures in glucose-brain-broth)

Case	Animal	Organism	Source	Animal Passage	Effect on Animal	Lesions in						
						Brain	Heart	Lung	Peritoneum	Spleen	Stomach	Kidney
118818	R46	Anerobic bacillus	Kidney	First	Died	0	3	3	3	3	0	4
	R47	Anerobic bacillus	Kidney	First	Died	0	2	3	3	2	0	4
	R48	Anerobic bacillus	Kidney of R46	Second	Died	0	0	3	3	0	0	4
	R49	Anerobic bacillus	Kidney of R46	Second	Died	0	0	3	3	0	0	4
331409	R13	Streptococcus Bacillus coli	Kidney	First	Died	0	0	0	0	0	0	4
	R14	Streptococcus Bacillus coli	Kidney	First	Died	0	0	0	0	0	0	4
	R15	Streptococcus	Kidney	First	Died	0	0	0	0	0	0	0
	R16	Streptococcus	Kidney	First	Died	0	0	0	0	0	0	0
	R17	Streptococcus	Kidney	First	Died	0	0	0	0	0	0	0
90665	R103	Bacillus coli	Kidney	First	Chloroformed	0	0	0	0	0	0	0
	R104	Bacillus coli	Kidney	First	Chloroformed	0	0	0	0	0	0	0
	R105	Bacillus coli	Kidney	First	No necropsy							
	R106	Bacillus coli	Kidney	First	No necropsy							
336486	R44	Streptococcus hemolyticus	Blood	First	Chloroformed	0	0	0	0	0	0	4
	R45	Streptococcus hemolyticus	Blood	First	Died	0	0	0	0	0	0	4
334480	R19	Streptococcus	Kidney	First	Died	0	2	2	0	0	0	3

as used in the foregoing experiments. In these control animals we have failed to produce any localization in the central nervous system. Thus it appears that the organisms in the two cases above possessed a potential affinity for the central nervous system, and this affinity was demonstrable both by intravenous and intradural injection.

Three cases of peritonitis, studied bacteriologically, had occurred without any preceding abdominal operation and at necropsy no intra-abdominal source of peritoneal infection could be ascertained after a most careful search. These cases fall into the class of cases of peritonitis designated as primary by Flexner. In two of the cases, cultures revealed septicemia. This finding suggests that in exceptional cases peritonitis may be primarily septicemia which localizes in the peritoneal cavity. Case 335984 is illustrative.

Case 335984. Mrs. H. R., aged fifty years, was admitted to the Clinic complaining of abdominal pain. The onset had been sudden and characterized by pain and tenderness in the right lower abdomen. One day later, vomiting had begun and the pain had shifted to the upper abdomen. The third day the abdomen had become enlarged.

The patient's condition was considered inoperable on admission. Death occurred two days after admission.

At necropsy a diagnosis was made of primary diffuse purulent peritonitis, early bilateral seropurulent pleuritis, acute diffuse nephritis, and pyorrhea alveolaris. Cultures of the blood, spleen, peritoneum, apex socket, and canal pulp of a tooth all yielded hemolytic streptococci.

Mouse 1 was injected intraperitoneally with 0.5 c.c. of the culture from the peritoneal fluid of the patient. The animal died on the third day. In its abdominal cavity was a small amount of bloody fluid, and the intestines were covered by a fine fibrinous exudate. There were no other evident lesions in the body. Cultures of the blood, spleen, and peritoneal fluid yielded hemolytic streptococci. Similar results were obtained in three guinea pigs and one mouse.

Rabbit 23 was injected intravenously with 5 c.c. of a glucose-brain-broth culture from the tooth pulp of the patient. On the sixth day the animal was apparently ill and did not wish to move, and its abdominal muscles were very rigid. It was chloroformed. At necropsy the peritoneum was lusterless and the peritoneal cavity contained a small amount of cloudy fluid. The abdominal organs were covered with a thin sticky exudate. On gross examination no lesions were found elsewhere in the body. The peritoneal fluid, spleen, and blood yielded pure cultures of hemolytic streptococci.

This experiment suggests the possibility that organisms harbored in the infected tooth may have acquired sufficient virulence or have met with such a decrease in resistance that they were able to cause septicemia and peritonitis. It must also be considered that the organisms recovered from the infected tooth may have been a part of the general septicemic infection. These results may be significant with reference to certain cases of peritonitis following operative procedures in the abdomen and suggest that under certain conditions of disturbed resistance organisms contained in foci may acquire general invasive power, and a patient in such a condition would be a poor surgical risk.

Necropsies were performed carefully on all of these animals. Evidence of pathologic change was judged by gross findings, and organs grossly involved were sectioned for microscopic study. It would be obviously desirable to make a microscopic study of all the tissues in the body, but such a procedure assumes almost forbidding proportions, and in large measure the gross lesions will give a good estimate of the regions that are chiefly involved. When we speak of certain lesions being the only lesions found, we mean that grossly no other pathologic changes were evident.

Discussion. The arbiter in questions of focal infection must be the internist and not the specialist. The specialist may render an opinion as to the local condition of the foci. Only the man acquainted with the patient's general condition can safely recommend the removal of foci, and he will be due for disappointment if his diagnostic acumen is not exercised to its fullest extent. It is obviously useless, for example, to expect the removal of foci to ameliorate conditions if the pains are ascribable to neuritis due to pernicious anemia, or to root pains due to an early neoplasm, or Pott's disease. Even then recommendations are of value only if the specialist and internist control their judgment by carefully following their cases and supplement their knowledge whenever possible by bacteriologic studies and animal experimentation. Another source of disappointment lies in the fact that often we can eliminate foci only after the insult has been long repeated and the damage done is irreparable or self perpetuating. It is the present belief that in long standing cases secondary focalization, for example, in a joint, may be established which obviously may not be eliminated by the removal of the original focus! It is evident, therefore, that early diagnosis and early location of foci is highly desirable in order to secure the most satisfactory results.

SUMMARY

1. In our experimental work bacteria recovered from various locations at necropsy including foci of infection exhibited selective localizing power in animals.

2. This selective localizing power has been demonstrated in eleven of thirteen morbid conditions, comprising cases of nephritis, gastric ulcer, encephalitis, and primary peritonitis.

3. Our evidence illustrates a valuable method of testing the ability to diagnose certain foci as related to disease processes.

4. It is emphasized that the specialist may render an opinion concerning the pathology in a suspected focus of infection, but conclusions as to its importance and treatment are to be left in the hands of the internist.

5. Careful control of the clinician's and specialist's judgment concerning foci by following up their cases and, if possible, supplementing their knowledge by bacteriologic study and animal experimentation will endow their opinions with the greatest value.

6. Early discoveries of foci and their removal yield the most satisfactory results. Long continued insult may result in irreparable damage or a self perpetuating process in a given structure. In such cases a guarded prognosis must be given, although the patient should be given the benefit of a possible cure.

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DISCUSSION

DR. VIRGIL MOON (Indianapolis): It happened to be my good fortune to be working in the laboratory of Dr. E. C. Rosenow at the time he was collecting the evidence which led to his giving out to the medical profession this evidence of focal infection. I saw him excise from the deltoid muscles of a patient who was acutely ill with muscular rheumatism a bit of muscular tissue. I made sections of that tissue myself and demonstrated in it streptococci. Dr. Rosenow cultured a bit of the tissue and obtained a pure culture of streptococci. These were immediately injected into animals—rabbits, guinea pigs and dogs; and not only did that organism localize in the muscles of those animals, but it localized in the shoulder muscles of those animals, giving a striking example of the selective action of the organisms.

I saw Dr. Rosenow isolate from the stomach mucosa streptococci and those cultures injected immediately into animals produced, as Dr. Barnes described, ulcers of the stomach. Not joint lesions, not muscular lesions, no localization in the gall bladder or the kidney or elsewhere, but in the stomach mucosa.

Again I saw him cultivate organisms from the gall bladder in cases of cholelithiasis, which organism when injected into animals immediately produced inflammation of the gall bladder. I have seen such performances, have seen the organism at the time it was first isolated, and then have had the experimenter show these lesions at points corresponding to those from which the same bacteria occurred in the patient, and not elsewhere. Such experiences cannot help but convince us of the selective affinity of these organisms under certain conditions. You, as internists with experience in various kinds of infection, have no doubt seen your patients with a diseased tooth or tonsil, with definite evidence of infection elsewhere in the patient, and you have no doubt seen those foci subside—not always, upon the removal of the original focus of infection. That should be to our minds evidence of the fact that there is something in selective localization, a selective tendency on the part of the organism to infect certain tissues. It is a striking fact that when these organisms have first been removed they give evidence of this selective localization, but after they have been cultured in the laboratory for a time they seem to lose this selective localization tendency and acquire an affinity for the joints and muscles, with rheumatism, and we get the affections of the joints and the muscles from these bacteria which have lost their particular selective affinity for the kidney, the gall bladder, the stomach mucosa, or other forms from which the organism was originally cultivated.

DR. GEORGE W. MCCASKEY (Fort Wayne): I have been from the outset convinced of the value of Rosenow's conclusions in regard to the elective affinity of bacteria for different organs and structures. In fact, his work has been so scientific, and his facts so firmly established, that I believe we must either repudiate his facts, or in a general way accept his conclusions.

It was a brilliant conception to find the focal infections postmortem, collate them with pathology, and proceed to establish their etiologic relationship by animal experimentation, and this has been done in a most convincing manner. The complete control of all of the conditions, with the possible exception of the time elapsing between death and autopsy, has made it possible

to lay the foundations for definite conclusions, and the work subsequently to be done by the internist, with great scientific accuracy.

A clinician cannot, of course, work under such conditions, but it seems quite possible, and therefore assumes somewhat the character of an obligation, at least in many cases, using every possible check, to work the problem out clinically. Everyone of experience recognizes the tremendous difficulties which we encounter clinically in "running down" a focal infection, which we feel certain exists somewhere. The teeth and tonsils are, of course, the chief points of attack, and too frequently the only ones, as peri-nasal sinuses, gall bladder, appendix, prostate gland, etc., etc., may be guilty.

In regard to the teeth, the difficulties of interpretation are very great. While it looks on the surface like a dental question, the conclusion is forcing itself on my mind that the clinician must ultimately make his own decision. One dentist will say, "take them out", and another, with the same evidence, will say they are harmless; which leaves the patient and the clinician "between the devil and the deep, deep sea".

Having found the focus, or abscessed tooth or tonsil, we cannot say at once that it is the cause of the pathology, any more than we can say that a positive Wassermann reaction points us to the main etiology in any given syndrome presented to us and associated with a positive Wassermann reaction. This work of Rosenow and his collaborators seems to point the way to the solution of this problem in many cases, and Dr. Barnes emphatically tells us that the responsibility is now up to the internist. This is certainly adding a few more straws to the load which we were carrying, but we will accept the responsibility with the best possible grace.

DR. HENRY E. ALBURGER (Indianapolis): I think we are ready to assume that the organisms are specific, that they have special tissues which they invade, and the point we internists are up against is a vexed one because we are dependent, I feel, upon the character of the work done by the men who ultimately remove the focus of infection. If you send a man to a dentist you are dependent upon the opinion of that dentist. He may be an up-to-date man or a very un-up-to-date man. I have had dentists refuse to take out teeth which I knew were infected, and were afterward proven to be so. I have seen many cases in which teeth were improperly removed—simply pulled out without removing the infection at the root. I have known cases in which we were able to demonstrate, fifteen years after extraction, that there was a granuloma at the apex which was still the source of local infection. I feel, therefore, that we are still responsible after sending patients to the dentists and nose and throat men, and that we are responsible for the work done by them on our patients. We cannot safely send a patient with focal infection to just any man either in nose or throat work or in dentistry.

DR. FRANK WYNN (Indianapolis): With the practitioner there is the confusion of mind as to where the focus of infection is that gives rise to the neuritis or rheumatism. We look at the teeth, the tonsils, the gall bladder, and everywhere we can think of and then say, "Where is it?" The tendency of the time is to blame the thing that is easy to find. That is, we look in the throat and if the tonsil shows any suspicion of disease how easy it is to say that it must come out. Or, if there is any reason at all to suspect the teeth are responsible, and especially if some over-enthusiastic radiologist makes a picture which arouses hope, here seems an easy way to get rid of the trouble and we say, "Take out the teeth." I think we are too drastic. My point is this, if Dr. Barnes can, in the post-mortem room, find the connection between—let us say the organisms at the root of an offending tooth and a gastric ulcer, then why should not every operating man make similar demonstrations? How many men extracting teeth are carefully studying the sockets from which they were removed? How many are making cultures and trying to determine whether there is any connection between the trouble complained of and the bad teeth? How many are making cultures from the tonsils when they are removed to see if there is a definite relationship between rheumatism and the tonsil removed?

DR. ROBERT V. HOFFMAN (South Bend): In regard to the nose and throat men, I know one man who has consistently taken cultures of every tonsil he has removed during the past two years. Almost without exception they have shown streptococcus hemolyticus, sometimes staphylococcus, but nearly always the streptococcus hemolyticus. He has not injected animals but he does make the cultures in practically every case. He has been unable to derive any facts of practical value from his findings.

DR. ARLIE R. BARNES (Rochester, Minnesota—closing): In answer to Dr. McCaskey's question as to how long the organisms were cultured after death, our postmortems were made about six hours after death, on the average.

I think there is a little hope for the profession on the standpoint of passing upon foci of infection, especially of the teeth, and I think the Mayo clinic is rendering much service in standardizing these criteria. They are culturing all these teeth routinely to decide whether they are infected and whether their radiological judgment is confirmed or discounted. I think many

teeth are pulled and a focus of infection left behind, as Dr. Alburger said, and I think the time is coming when the teeth will be removed surgically. The Mayo clinic is doing the external alveolectomy, chiseling out the bone, lifting the tooth out carefully, cleaning out the socket and sewing up the gum. The healing is perfect and they get very excellent results.

We find that if we carry the cultivation through more than one artificial media we get into trouble, unless we cultivate on a special media by which we can keep up the virulence of the culture a little longer. On blood agar plates the selective localizing power is lost very quickly.

I wish to thank the gentlemen for elaborating this paper in their discussion, and I consider it a great honor to have had the opportunity of addressing this body.

TRACHOMA OR FOLLICULOSIS AMONG SCHOOL CHILDREN*

J. A. STUCKY, M.D.
LEXINGTON, KENTUCKY

It is an interesting coincidence that ten years ago today in this city at the meeting of the American Academy of Ophthalmology and Otolaryngology, I presented an informal report on "Trachoma and Ophthalmia in the Kentucky Mountains". My report was simply a "heart-to-heart talk" with the leading ophthalmologists regarding the greatest problem I had ever confronted. It was in reality an "S. O. S." call for help. My curiosity, not unmixed with ambitious conceit, had led me into the mountains to ascertain where the large number of cases of trachoma that I saw were coming from, and I was determined to ascertain the cause and to remove it.

As a result of my report, the House of Delegates of the A. M. A. notified the United States Bureau of Public Health in Washington to get in touch with the State Board of Health of Kentucky and ascertain if my report at this meeting was not an exaggeration. As a result of this, a few months later, at the request of the State Board of Health of Kentucky, Dr. Jno. McMullen, one of the expert diagnosticians in trachoma, representing the U. S. B. P. H., accompanied me on one of my Mountain Clinics and reported to the Board in Washington and to the State Board of Health in Kentucky that he found the percentage of the cases among the inhabitants in "the heart of the hills of Kentucky" was more than twice what I had estimated. At the earnest solicitation of our State Board of Health Dr. McMullen was ordered to remain in the Kentucky Mountains, with sufficient help to arrest or eradicate the disease. Five hospitals were equipped with surgeons and nurses at each, and several thousand cases of the disease were treated under the supervision of Dr. McMullen. The result of this has been a very decided decrease in the activity of this disease. Many have been relieved of their suffering and their impaired vision restored. Thus you see that in this city a decade ago, a great work for humanity was started, and I am delighted to report the great progress we have made in the treatment of the disease. We have not only been able to relieve but to arrest its ravages, though I am humiliated to report that the specific etiological factor in its production has not been ascertained, and I am hoping that today, at this meeting, we may receive some suggestion and cooperation from you that will enable me to report in another ten years or less that this etiological factor has been isolated, the disease controlled, and that what has for so long a time been a reproach to ophthalmology has been removed.

As a result of the publicity given this work in Kentucky, through the magazines, medical journals and bulletins published by the U. S. B. P. H., the whole civilized and scientific world, including both Europe and America, speak of the mountains of Kentucky and Eastern Tennessee as being one of the hotbeds and breeding places of what the government has pronounced "a communicable and destructive disease of the eye."

As near neighbors of Kentucky, with whom we have much in common, I feel that I have the right to come to you with a continuance of my heart-to-heart talk of ten years ago, asking and expecting helpful suggestions from you that will lead to a concerted, concentrated and persistent effort on the part of the medical profession, philanthropists and sociologists to spare no effort or expense to ascertain and isolate the specific etiologic factor in the cause of trachoma.

As I stated ten years ago, I repeat today, I am not certain whether it is of bacteriological origin, whether it is a fly-borne, insect-borne, house disease, or whether it is due to a specific micro-organism, but I am convinced that it is not as actively infectious as I thought it then, and is less amenable to permanent eradication; and I am more and more convinced that it requires for its solution in addition to medical and surgical treatment more sanitary and hygienic living. Wherever high-grade schools exist, with community nurses and the laws of sanitation and hygiene are observed, the ravages of this disease have diminished.

Within the past year much interest and discussion have been caused among ophthalmologists, boards of health and school boards, especially of the South, regarding the increase of this disease in insidious form in the public

*Read before the Section on Ophthalmology and Otolaryngology of the Indiana State Medical Association, Indianapolis Session, September, 1921.

schools. This interest and discussion have extended to the far West, especially where the disease has been found among the Indians in one or two places, and considerable heated discussion has taken place over the difference in diagnosis between conjunctival folliculosis and trachoma. Objection has been raised in some localities to the somewhat radical procedure advocated by the public health officials in dealing with suspicious cases. Because of this discussion, led chiefly by Dr. J. W. Jervey, Greenville, South Carolina, a committee was appointed at the meeting of the A. M. A. at New Orleans, Louisiana, in 1920, to go carefully into the subject and report at its next meeting, which was held in Boston this year, the points of differentiation between folliculosis and trachoma, with suggestions as to what should be done. This report, with which you are no doubt thoroughly familiar, was made somewhat at length to the Section on Ophthalmology, and being a member of that committee, I have nothing to add, but will repeat my discussion of Dr. Jervey's paper* before the Louisville and Jefferson County Medical Society, May 2, 1921.

The greatest problem confronting the country today is how to handle the trachoma situation. The United States Bureau of Public Health has accomplished much good work, and so far as I am able to judge the progress of the disease in the mountains has been arrested, its ravages have been mitigated, but whether many cures actually have been effected I have yet to decide. I confess that I do not know when trachoma is permanently cured.

The citation of a few (out of a large number) concrete cases may be interesting: I operated upon a child (female) for trachoma nearly twenty years ago. The disease recurred from time to time and she was subjected to several subsequent operations. Dr. McMullen, U. S. B. P. H., an expert in this line of work, operated on her once; later one of his assistants operated her. She is now about thirty years of age and came to me a few days ago with another "flare up" of her trachoma. Inspection shows the conjunctiva brawny, smooth, many cicatrices are present, and characteristic new trachoma bodies are visible, with entropian both upper and lower lids.

I recall a prominent Methodist minister upon whom I operated fifteen years ago. I thought he was cured and told him so. Last winter he returned with the most severe and intractable "flare up" that I have had to deal with in many years. I consider trachoma one of the most mysterious and treacherous of diseases.

There is just now a great interest among medical men of the United States about the differential diagnosis between folliculosis and trachoma. And, candidly, notwithstanding our large experience with the disease in the mountains of Kentucky and Tennessee, I do not believe a differential diagnosis can always be made in the early stages.

A few years ago twelve or fourteen cases of trachoma were reported to me by the Medical Inspector of Schools in Lexington. Upon examination of these cases I confirmed the diagnosis and the children were excluded from school. They all had evidence of acute trachomatous folliculosis with discharge and photophobia. I ordered these children to the hospital for operation, but not one of them reported. I then appealed to the Board of Health without any immediate results, and in the meantime the inflammation and discharge subsided, under care of the district nurse who was giving the treatment I had ordered. The Health Board asked me to examine the children again a month later, which I did, and at that time the disease did not look so much like trachoma but more like folliculosis, so I concluded that I must have been mistaken in my original diagnosis. To make a long story short, these twelve or fourteen children, and thirty or forty other border line cases, have been kept under close observation for four years. They showed marked improvement after removal of their tonsils and adenoids, and were permitted to return to school. It is evident that they did not have trachoma.

My ideas about the diagnosis and treatment of trachoma have undergone material changes during the last few years. In true trachoma I believe in being radical, so far as treatment is concerned, but we should be certain that we are dealing with true trachoma before resorting to radical measures. I am not sure that I can make a diagnosis of trachoma in the early stages, and we are waiting for somebody to determine definitely the etiology of the disease. We are told in the beginning trachoma looks like ordinary conjunctivitis, but if extensive hypertrophy occurs, if the conjunctiva cannot be stretched, and the blood vessels plainly seen, especially if other members of the family or anybody in the neighborhood with whom the patient comes in contact show conjunctival cicatrices, then I at once convict that patient on circumstantial evidence and treat the case as trachoma.

I have just gone through a long siege in the committee on trachoma appointed by the Section on Ophthalmology of the American Medical Association, with especial reference to differential diagnosis of folliculosis and trachoma, and my views in brief are as follows:

"In my mountain clinics it has been difficult to decide whether a case in the acute stage

*Folliculosis or Trachoma Among School Children—J. W. Jervey, Greenville, S. C.

was trachoma, but if the conjunctiva was thickened and inflamed, and there were other cases of the disease in the family or the neighborhood, the case was regarded as suspicious and treated as trachoma. In the second stage my differential diagnosis between trachoma and follicolosis of the conjunctiva was based on my observation that in simple follicular hypertrophy (that is, adenoid hypertrophy of the sub-epithelial layer of the conjunctiva) the conjunctiva is easily and evenly put on the stretch, the whole membrane being elastic and the blood vessels easily seen. But where the hypertrophy involves the whole body of the conjunctiva (papillary hypertrophy or papillary thickening) then the conjunctiva cannot be stretched and the blood vessels are not visibly outlined. While this is a pathological differentiation, it is applicable in the study of every case. I prefer the term *adenomatous conjunctiva,* inasmuch as it covers the ground whether or not there are inflammatory phenomena present, and does away with the necessity of distinguishing between folliculosis (without inflammation) and follicular conjunctivitis (folliculosis plus inflammation).

Whether trachoma exists in epidemic, pandemic or endemic form in the public schools of the South I do not know, but I am sure it does not in Lexington. I see more of it now in central Kentucky than ten or fifteen years ago, and the majority of the cases come from the type of individuals and surroundings living in the mountains of Kentucky; but I have seen persons with trachoma who were reared in affluence, with perfect sanitary and hygienic surroundings. One was a prominent lawyer, and another the minister to whom reference already has been made.

The disease is undoubtedly conveyed from one person to another by morbid secretion, but whether this contains micro-organisms or some other infective substance we do not know. In my opinion trachoma in the terminal or cicatricial stage is not contagious; it is contagious only in the active stage when there is secretion. My observation has been that pannus is almost pathognomonic of trachoma; in fact, I do not recall having seen a single patient with pannus who did not have trachoma.

Differentiation between trachoma and folliculosis cannot always be made by sight nor even by the microscope, and where we cannot be positive, I believe we should give the patient the benefit of the doubt, and treat the case as suspicious. I do not believe every suspicious case should receive the radical treatment of grattage. To properly do this operation requires surgical skill and judgment.

There are certain phases of the trachoma problem about which we must be careful. Some of the after-effects of trachoma cannot be relieved by any means of which I have knowledge. The following are quotations from several who discussed the question raised in Dr. Jervey's paper on Folliculosis or Trachoma Among School Children:

DR. J. O. CARSON, Bowling Green, Ky.

"I do not believe early cases of trachoma ever will be positively diagnosed until the specific causative factor has been demonstrated by bacteriological and microscopic investigation. Some observers claim to have isolated the causative agent, but their findings lack confirmation. Until the etiology is settled, a positive diagnosis of trachoma cannot be made unless scar tissue is present, and then it is too late to accomplish very much by treatment.

"Epidemics of trachoma occurring in armies is an entirely different matter. Owing to their surroundings soldiers are probably oftener exposed to exciting causes than are civilians, and therefore trachoma is not uncommon. Many cases were observed in the various camps during the war.

"I am aware of instances where folliculosis was treated as trachoma with considerable destruction of tissue and resulting deformity. The operation usually performed for trachoma may seem a simple procedure, but sometimes the patient is in worse condition afterward than before. For that reason I am inclined to treat the patient by simple measures until the nature of the disease is positively determined. It hardly seems necessary to say that patients with trachoma should only be treated by someone who has had experience in that class of work."

DR. JNO. MCMULLEN, U. S. B. P. H.

"If a case is counted as suspicious of trachoma, of smallpox, or of any other communicable disease, if we honestly believe it is suspicious, is it fair to permit the patient to associate with others to determine whether or not they will contract this particular disease? Those of us who have been working in trachoma for a long time and have seen its detrimental and damaging effects upon the eye, believe that the disease has certain potentialities, and that suspicious cases should not be permitted to come in contact with the well. That should be our attitude in regard to all communicable diseases.

"We see cases of trachoma affecting one eye, even progressing to the stage of cicatricial tissue formation, the other eye not being involved. We have often been asked why that is. I do not know, but we realize there is a great deal about immunity that we have yet to learn. The same question might be asked concerning gonorrheal ophthalmia; why do not all men with gonorrhea have ophthalmia, and why do not both eyes become infected? A similar statement might be applied to scarlet fever and many

other diseases; why does not the disease affect every member of the family? When speaking of the cure of trachoma of course I realize that in some instances the disease may recur, but this is no reason why we should not make an effort to cure it.

"In 2,900 cases of trachoma in which our records are known to be complete, though many of them are incomplete, because some of the patients live in remote districts and the end-results cannot be determined until we can again examine them, of the 166 children under five years of age included in the above, 19 had ulcer, 23 impaired vision, 60 had photophobia, 25 had pannus, 3 were blind in one eye and 1 in both eyes. Between five and ten years of age there were 631 cases. I will not take the time to present further statistics except to say that 50 percent of our trachoma patients had photophobia; from 25 to 30 percent had pannus; 10 to 15 percent had ulcers. I have about concluded that blindness may not be the worst result that can happen to a child with trachoma. With deformity of the lids, with damage to the ocular structures, with dwarfing of both body and mind as these children develop, simply because their entire lives are spent in shielding their eyes from the light, their condition is indeed pitiable."

DR. S. G. DABNEY, Louisville, Ky.

"I believe all suspicious cases should be treated as trachoma. They are rare in our community and from what I have read they are elsewhere outside of certain localities. Genuine cases are not always from the mountainous regions. I have seen a good many cases of trachoma from southern Illinois (hence the name 'Little Egypt' some say), a few from Jefferson and other counties in Kentucky. However, the majority of the genuine cases of trachoma I have seen were from the mountains of Kentucky and Tennessee. I have seen a few cases in the school children of Louisville. It hardly seems necessary to state that all cases of genuine trachoma should be operated upon at the proper stage, but often operation fails to cure when at first it seems perfectly satisfactory."

DR. ADOLPH O. PFINGST, Louisville, Ky.

"In trachoma there is a thickening of the mucous membrane between the follicles; in folliculosis the follicles seem higher than in trachoma, but this is more apparent than real, the lymphoid follicles are of the same size in each disease, but owing to the thickening of the conjunctiva in the early stage of trachoma the follicles appear less elevated than in folliculosis in which the conjunctiva is less swollen."

DR. J. W. JERVEY, Greenville, S. C.

"No one can differentiate between folliculosis and trachoma in individual cases; the follicles in the early stages are absolutely indistinguishable; but when there are hundreds of cases of conjunctivitis in children, with no papillary hypertrophy and no cicatricial tissue, pannus nor anything else definitely diagnostic of trachoma after prolonged observation, it may be positively stated that there is no trachoma among such children."

Having given briefly my own views and those of several leading oculists of Kentucky who see many of these cases, also the statistics of the cases seen in Kentucky by the representatives of the U. S. Bureau of Public Health Service, as well as their attitude on the trachoma question—and since the report of the committee appointed to define the differential diagnosis between trachoma and conjunctival folliculosis has been adopted by the Section on Ophthalmology of the A. M. A., what more shall we do? Shall we continue to combat conditions and not causes and to fight symptoms and sequelæ instead of etiology?

I am beginning to think that the contagiousness or communicability of trachoma is on a par with tuberculosis, in that it is not actively contagious but is contracted by long continued or repeated exposure to the infection, and when the same thought and effort shall be given to ascertaining the causative factor of trachoma, as was given to tuberculosis, the problem will be solved, but until then the greatest good to be accomplished will be by the Scientific Medical Man, the Public Health Nurse and the Teachers of Hygiene and Sanitation.

DISCUSSION

DR. E. M. SHANKLIN (Hammond): In my opinion the all-important factor in the management of the trachoma situation, not the individual cases but the whole question, is the education of the oculists. I was disposed a year or so ago to regret the disputes that arose concerning diagnosis, but as I view it now that discussion regarding the differential diagnosis between folliculosis and trachoma has been a veritable godsend.

In our own state I recall a report made by Dr. J. W. Neideger of the United States Public Health Service relative to the trachoma situation in Bartholomew County. It seems that when he first went down there he was advised there was no trachoma in that county. His preliminary inspection of the country schools in two townships, brought to light 38 cases of active, second or third stage trachoma. About that time, less than ten years ago, I made inquiry of several doctors in the more populous communities in Indiana and found the reports varied; some oculists claiming there was no trachoma in their communities while others said

they saw from fifty to seventy-five cases annually. That is not so far in the past as to make me change my statement that the education of the profession is a very important thing if we are to properly approach this very important question.

I like the Doctor's statement relative to the differential diagnosis between folliculosis of the conjunctiva and trachoma, and that in the first stage trachoma is difficult to diagnose. I also liked his differential diagnosis in the second stage relative to the tenseness of the conjunctiva and the appearance of the vessels.

The Doctor speaks of grattage, which has come to be the accepted treatment. As a matter of historical interest I might mention that several years ago I heard of the treatment of trachoma by a non-medical man down in southern Indiana. The treatment was as follows: A little stick of copper sulphate was whittled out one inch in length and about a quarter of an inch in thickness. This was placed in an ounce of 50 percent alcohol with a piece of alum about the size of a quail's egg, and a piece of indigo about the same size. The stick was left in there for 24 hours. The upper lid was then inverted and the stick rubbed twice—no more—across the lid. A large basin of boiling water was then brought out and put on a chair in front of the patient, the patient's head enveloped in a large cloth, and he was forced to sit with his face over that hot water and undergo the steaming process for thirty minutes, or until the pain subsided. That treatment was used every other day for a period of two weeks, and failure, according to the history that goes with the story, was practically unknown.

Dr. W. A. Spurgeon of Muncie sent an emissary down there and got the formula by paying for it, and he tells me that until ten years ago he used that treatment with wonderful results.

DR. BERNARD J. LARKIN (Indianapolis): It is a great pleasure and benefit to hear such an eminent authority as Dr. Stucky attack the trachoma problem and it is regrettable that we have not more men to do such scientific work along these lines.

Trachoma is prevalent in Indianapolis, as was shown by the survey during the year 1916. I do not remember the percentage, but it was high, both children and adults. The conclusion arrived at was that it would be better to concentrate on the children because the adults seemed prone to ignore or antagonize our efforts to relieve. With our follow-up system we feel that we accomplished a great deal.

The greatest difficulty encountered was the lack of cooperation on the part of other oculists. For instance, in one district whenever a supposed case was excluded from school the principal immediately got in touch with an oculist, who would give this child a certificate to return to school. However, the Board of Health finally decided that when a child was excluded from school it should not be permitted to return until the survey thought there was no danger.

Dr. Stucky has thoroughly covered the treatment, and I wish only to emphasize that we always get better results in children. I would urge the members of this Association to give especial attention to them.

DR. ALBERT E. BULSON, JR. (Fort Wayne): To Dr. Stucky belongs the credit of having called our attention to the wide-spread prevalence of trachoma in the mountainous districts of the South. The situation demands not only conscientious and skilled treatment of the unfortunates who are suffering from trachoma, but an earnest effort should be made to discover the etiology of the disease with a view to more effectual prevention.

To my notion the Federal Government should expend more money and more time in an effort to determine the etiology of the disease. It also is a work that could well be taken up by the Rockefeller Foundation which, as you know, is spending much time and money in investigating typhus fever, yellow fever, hookworm and some of the other disastrous diseases.

With the public the feature that deserves more emphasis is the fact that trachoma, like all eye diseases of contagious character, is conveyed by fingers, roller towels, handkerchiefs, etc. Much may be accomplished in the way of preventing eye diseases if children are taught that nearly all communicable eye diseases are conveyed by the fingers and consequently the fingers should not be used to rub the eyes.

So far as the recognition of trachoma is concerned I think Dr. Stucky has hit the nail on the head when he says that neither he nor anybody else always can make a diagnosis of trachoma in its acute stage. I have had considerable experience in the treatment of trachoma and while I am satisfied that I can recognize the disease in the secondary stage yet the acute stages of the disease are uncertain of recognition. There must be a specific cause for the disease, and with its discovery there can be no excuse for not differentiating trachoma from any other condition. I made a diagnosis of trachoma in one of our public institutions, an orphan school for girls, where the disease was fairly acute, but that diagnosis was based upon the fact that the disease developed shortly after the admission of an inmate having sore eyes which from the history and appearance of the condition justified a diagnosis of trachoma. My advice that the affected children be isolated was

not accepted and the disease went through the whole school, resulting in much damage and the necessity for treatment and care for years afterward.

Concerning the question of treatment I want to say that, aside from surgical operations, including grattage and excision of follicles or thickened tissue, I think there is nothing better than sulphate of copper. It is a very painful treatment when the pure stick is employed, but there is no question about its efficaciousness. Many years ago I saw a large number of cases of trachoma in the secondary stage which appeared among the foreign population in our city, and at that time Dr. Prince, of Springfield, Illinois, who happened to visit me about that time, recommended a saturated solution of sulphate of copper in glycerine as a routine application, the solution to be diluted as required in order to offset any reaction not well tolerated by the patient. Personally I am satisfied that a severe reaction is beneficial and shortens the time required for recovery, so I usually give an adult patient a quarter of a grain of morphine, and twenty or thirty minutes later, following local anesthesia of the eye, the pure copper stick, or the saturated solution of copper and glycerine, is applied to the everted lids thoroughly. This is repeated about once a week, and in the intervals between treatments a weaker solution of copper is used by the patient at home. I have seen rather remarkable results from this plan of treatment, and it is especially valuable in those cases where the pannus is well marked. Patients usually are asked in advance whether they will stand for the punishment, and invariably they will submit when they are told that the results justify the discomfort.

Again I wish to reiterate that I think we should bring pressure to bear upon the Federal Government, and even the Rockefeller Foundation in an effort to enlist the cooperation of those agencies in determining the etiologic factor in trachoma. We can and should discover the cause, but it probably means an expenditure of more time and more money than can be devoted to it by any agency outside of that subsidized by the Federal Government or Rockefeller Foundation.

DR. GEORGE F. KEIPER (Lafayette): Every case of trachoma is potential for great harm in inoculating many more people. Some twenty-five years ago at the St. Joseph Orphanage and Manual Training School just outside the limits of the city of Lafayette we had a very severe epidemic of trachoma. When the sister in charge first called me I found four boys with sore eyes; at the next visit I found four more. Then I ordered an inspection of the school and found 95 cases afflicted with trachoma in various stages of the disease. We segregated these boys and did not allow them to come in contact with the other boys, but it was two years before the last case was dismissed as cured. When we traced this epidemic to its origin we found one boy was responsible for it. This boy had recently come from a similar institution in Fort Wayne. I wrote Dr. Bulson, and he investigated the institution there and found 125 cases of trachoma.

Dr. Bulson in his discussion has covered some of the things I wanted to say, but I would like to emphasize some of his points.

First, in reference to Prince's solution. It is ten percent solution of sulphate of copper *in glycerine*. One drop of this solution is put in ten drops of previously boiled water, left to cool. It is then used freely in both eyes, every four hours. The strength of the solution is gradually increased by leaving out a drop of water to the dose daily until one drop of the solution is used in ten drops of water. It must not be used any stronger, and it must be used as above. It will not admit of any modification.

Second, when we are forced to treat these cases mechanically there is no better way than to sandpaper the conjunctivæ of the everted eyelids. I like this better than the roller forceps.

Third, the differential diagnosis between follicuIosis and trachoma is difficult at times, but a frank case of trachoma should be difficult to recognize. Even the stretching of the eyelid will at times fail to give a positive diagnosis. When in doubt, treat the case as trachoma, but avoid violent means like grattage or even sandpapering the conjunctival surface of the eyelids.

Fourth, the sequelæ are numerous and oftimes tax the patience and ingenuity of the doctor—but that is another tale.

DR. JOHN R. NEWCOMB (Indianapolis): You have heard from Dr. Stucky the tragedy of trachoma, and it is a tragedy. But, gentlemen, we are fighting in the dark. It is not a fair fight so far, and we must have light on it. As Dr. Bulson mentioned, and as suggested at the Kansas City meeting of the Academy, why should the Rockefeller Foundation spend its millions in South America, when it could spend the same amount of money in a scientific investigation of trachoma and obliterate, in years to come, this horrible plague that is in our midst? It is right here with us. We find hundreds of cases in this city—yes, thousands. For that reason I say that none of you can diagnose trachoma. I defy any man in this room to make an absolutely accurate diagnosis of trachoma. It can't be done. As for differential diagnosis, it means nothing.

I simply wish to be a ditto mark to all that Dr. Stucky has said; but I beg of you to realize

that this situation is a disgrace to ophthalmology today. Let every ophthalmological association, every group of ophthalmologists, get back of this thing, get back of your bureau of investigation, and everybody dig down in his pocket and help.

DR. B. D. RAVDIN (Evansville): Somewhere in the foreign literature—perhaps Dr. Bulson may enlighten me—I read that one of the observers found that almost every one of the children who had trachoma responded to the tuberculin test, and by giving that test you can save time.

Personally, I have not investigated this question, but it seems to me that since none of us seem to know very much about it, we should try out these treatments that have been mentioned. Since the observers claim that children who have trachoma do respond to the tuberculin test, why not try it out here in America?

DR. D. O. KEARBY (Indianapolis): Not being an eye man I cannot discuss this paper except as it appeals to me from the horrible picture that Dr. Stucky has presented.

The thing that appeals to me is a point our chairman touched upon in his paper, and that is that we should go further back than having the Rockefeller Institute or the Government send an isolated man into some community to take up this matter. We should begin to teach the public some of these things. When you stop to think of the dollars that are spent in schools and on teachers, in order to raise up a child to fill a special position, or handle a job of some sort to make a few dollars, when there is not a single cent spent anywhere for the purpose of teaching him how to take care of himself—it is a tragedy, and I feel that somewhere (I don't know who is going to do it if the medical profession does not) there should be an organized educational effort, an arrangement made by which pupils in the public schools can be taught something with reference to how to prevent disease, rather than have them come to us for treatment after they have it.

DR. STUCKY (closing discussion): I greatly appreciate the generous and sincere discussion of my paper and I feel more encouraged about the future in regard to the solution of this great problem of trachoma than ever before, because I feel that genuine good will result from what has been said in the discussion. It is no exaggeration to say that the half has never been told regarding the tragedy being enacted by the scourge of trachoma in the mountains of Eastern Kentucky, and the problem is a Public Health one, because it concerns not only the people in the mountains but all with whom they come in contact. It is no reflection on the ophthalmologist who sees only a few cases each year when he says he is not familiar with the disease. In the first stage it is most difficult to differentiate true trachoma from other well known diseases of the eyelids.

The public must be taken into our confidence and educated to the real condition and danger that exists, and when it is aroused it will meet the situation as it always has done through assistance to and cooperation with the medical profession. Fortunately, so far, we have never had an epidemic of trachoma, but if we should and a similar percentage of the public were inoculated and afflicted as they were by influenza a year or two ago, the suffering and sorrow that would result is almost unthinkable.

I purposely did not say much about the treatment of trachoma, but I do not hesitate to say that I do not believe that grattage will cure the disease, though it puts the eye in condition to enable us to do more for them afterwards, and the subsequent treatment is most important. I think more and more of the old copper treatment for trachoma, especially for the patient to use at home. There is nothing superior to it, though I also use a ten percent solution of trichloracetic acid rubbed into the trachomatous lids. Wherever we have schools, public health nurses, and close attention to personal sanitation and hygiene we have greater success in dealing with the disease.

A CASE OF ECLAMPSIA WITH 42 CONVULSIONS

TREATED BY CAESARIAN SECTION, PHLEBOTOMY AND BLOOD TRANSFUSION: SURVIVAL OF BOTH MOTHER AND CHILD

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The patient, aged thirty years, entered the Robert W. Long Hospital on April 5, 1919, near the middle of the ninth month of her second pregnancy. (The first pregnancy had been uneventful and had terminated in a normal delivery.) There had been five convulsions within the last seven hours. Each convulsion had been more severe than the preceding one and the intervals between were successively shorter.

Six weeks prior to admission she had had an attack of influenza which had been followed by a marked albuminuria. At the age of ten years and again at the age of twelve years she had had a facial paralysis of the right side of the lower neurone type. As a child she had been obese but had become thin at the establishment of catamenia at the age of fourteen years. No other significant facts were elicited. The acute attack was ushered in by a suddenly developing

headache, epigastric pain, and blurred vision, followed by the convulsions.

Physical examination upon admission: Temperature 104.6 F. Pulse 110 and Respiration 24. She was a robust woman of the stout type, with dry skin and edema of the extremities. The scleræ were clear. The pupils were round and reacted to light and accommodation, with the left slightly larger than the right. There was some edema of the nerve heads. The thyroid showed moderate general enlargement. The lungs were resonant throughout, and the breath sounds were clear. No enlargement of the heart was found by percussion, no thrills nor shocks were felt, and no murmurs were heard. The liver dullness extended from the sixth rib to the costal margin in the midclavicular line. The spleen was not felt. The knee jerks were increased but equal. Urinalysis showed a heavy coagulum of albumin, many granular casts, and a few waxy casts. The blood pressure was 180 systolic and 120 diastolic. The fetal heart rate was 134 per minute and was heard in the left lower quadrant. Pelvic examination revealed a cervix which was undilated and rigid. From these findings cæsarian section was considered preferable to any method of vaginal delivery.

Treatment:

(a) Cæsarian section: This was done under light ether anesthesia immediately after admission to the hospital. Very little hemorrhage occurred. The abdomen was closed very securely. A living babe was obtained, but respirations were initiated only after considerable difficulty.

(b) Phlebotomy: This was resorted to only after some hours had elapsed and more convulsions had occurred. In all 1200 cc. of blood were withdrawn.

(c) Blood transfusion: In order to replenish the blood volume 625 cc. of whole blood were given, from the husband, by the Kimpton-Brown method. It was hoped that the fresh blood would exert a beneficial influence upon the course of the disease.

(d) Various supplementary measures. Morphine was given freely. At the very beginning a fluid intake of 3000 cc. per 24 hours had been instituted, and this was maintained throughout the course of the convalescence by means of normal salt solution intravenously and proctoclysis, and later by stomach tube as improvement of condition became apparent. Hot packs were given, for short intervals, on two occasions.

Convalescence. Subsequent to the cæsarian section there were no convulsions for two hours, during which time the patient roused sufficiently to inquire about the babe. Beginning after two hours and continuing for thirty hours there were 37 convulsions. In the last two hours of the period there were rapidly recurring seizures of from one to three minutes' duration, with intervals of from four to six minutes of coma. Once during this time the rectal temperature rose to 107.3 F. It was combated by means of ice packs and ice enemata. After the cessation of the convulsions there was profound coma for 48 hours, followed by a gradual recovery of mental and muscular powers. Aphasia, which was present at first, gradually cleared, although slowly. A paralysis of the right arm and leg changed to a weakness and finally there was complete restoration of function. The patient was discharged on the fortieth day after admission.

The course subsequent to the discharge from the hospital has not been entirely satisfactory. The child is vigorous and healthy and although too young as yet to give evidence of mental inferiority seems to be quite normal. The mother's mind has not recovered completely. At the present time, two and one-half years after the illness, her mentality is about that of a child of twelve or fourteen years.

The convalescence of the mother in this case presents nothing unusual. In fact paralyses, aphasias and affected mentality are rather uniformly the rule. However, recovery is unusual in a condition of such severity, and to just what therapeutic measure it is attributable is not plain.

Dold[1] [2] showed that blood serum would neutralize the toxic properties of certain tissue extracts. Obata[3] demonstrated that the ability of the blood serum of women with eclampsia to neutralize the toxic products of placental extracts was diminished or absent. From the above mentioned data Bell[4] [5] reasoned that blood transfusion was indicated in eclampsia and treated a case in April, 1920, by this method with recovery of the mother. The present case was treated in April, 1919, by transfusion as an adjunct to the supportive and eliminative means usually employed. It now seems that blood transfusion has a basis of scientific fact to recommend it in eclampsia and perhaps in the treatment of other toxemias of pregnancy.

Granting that placental extract is toxic when injected intravenously in animals we have, as yet, insufficient evidence to say that the placenta *in situ* is the source of the toxins which are thought to cause eclampsia and kindred conditions. However, we are justified, it would seem, in using blood transfusion in these cases since it offers hope of a lowered mortality and is eminently safe if properly carried out.

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THE PHYSICIAN

SOME NEWER TENDENCIES IN PREVENTIVE MEDICINE*

By
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Medical research in recent decades has given a distinctive bent to preventive medicine. The discovery of bacteriological causes of disease naturally and properly turned the eyes of public health agencies toward the infecting organisms and measures to prevent their dissemination. It has been a wonderful chapter in the history of the public health movement. What follows is not to be taken as a criticism of the progress made in the realm of sanitary science. Let the legitimate propaganda go on multiplying their beneficent influence. The exhortation offered is that we should not allow the brilliancy of the work accomplished in the field of infections to blind us to the urgent call of other public health work, separate and distinct from contagious and infectious diseases. In our enthusiasm and diligence in searching for specific causes in the test-tube or under the microscope, we have perhaps been too much inclined to forget the individual as a whole—the living, growing, reacting organism with complex phenomena which make up the warp and woof of life, in health and disease. Let us remember that the biggest problem in public health is now, and always will be, how to make the strongest possible individual, capable of fighting his own battles against disease-invasion—this rather than keeping him from coming in contact with the contaminating agency, important as this may be.

Advancement in education constitutes the chief boast of modern civilization. But if one applies the principles of scientific analysis to the methods in vogue, it does not take long to reveal gross faults which work both harm and injustice to many seeking the benefits of education.

Public schools and colleges are like so many mills into which children and young adults of all classes and capacities are dumped, with the expectation that they will be ground into uniform, superior mental and moral flour. The commercial miller would not be so foolish as to mix wheat, rye and corn, expecting thus to get a superior product acceptable to a critical public. Wisely he would separate the grain, give each a different treatment, and thus produce a fine marketable product. Not so in education. All must go into the same hopper, be ground between the upper and nether millstones of long usage, trusting to the sieve of routine examinations to strain out the unworkable materials, which are cast aside as refuse—weaklings, incompetents, failures, delinquents; in their life-work inefficient, discouraged, in the end oftentimes becoming a community burden.

A few years ago the manufacture and refinement of petroleum was a thing unto itself. What remained or arose in the course of the process was considered sheer waste which was cast aside. The application of scientific study and economic conservation has proved that the by-products of petroleum are of greater value than the oil itself. At the present time a similar waste is going on in the by-products of our present system of education—the supposed failures, delinquents and the like who are threatening to become public or private charges, but by proper direction at the right time and in the right way, may be conserved as useful citizens.

The observations here made are prompted in good part by the remarkable work of H. H. Goddard, director of the Bureau of Juvenile Research in Ohio. As he sets forth it is possible by means of the Binet and kindred tests to determine the mental level of the individual, his adaptability and intelligence in handling knowledge. Primarily the test was employed in the recognition of feeble-mindedness; also in the mental evaluation of delinquents and criminals.

During the world-war the plan was applied to the U. S. Army for the determination of those suited for over-seas service. By this means classification was possible according to capacity and adaptability. In the great conflict it was universally recognized that American soldiers were noteworthy for their ability to act promptly, with fine initiative and intelligence, when emergencies arose. The men had confidence in themselves which insured the dash and success which amazed the world. If the working out of mental levels has thus been demonstrated by army experience to be so practically valuable, does it not offer the strongest argument for applying similar tests and principles in our educational regime? Is it not far better that one should learn his true mental plane where his capacities will count, than that he should be forced to higher levels to which he is not adapted and from which he will fall into the depths of failure, and discouragement? The highest function of education is not to force upon one from without unassimilable knowledge, but rather to work from within out, enabling the child or youth to find himself. Show him his own powers and limitations and fire him with zeal for the accomplishment of those things which he can and ought to do.

Educational workers the country over are awakening to the need of applying intelligence tests in the classification of pupils and students. Columbia University makes such a requirement of those entering the freshman class. In the

*Eighteenth of a series of articles by Dr. Wynn which appear regularly in THE JOURNAL.

State of Indiana a very noteworthy and exhaustive research has recently been completed by Wm. F. Book, head of the Department of Psychology in Indiana University, in collaboration with Oscar H. Williams, of the State Department of Education. I have been privileged to examine the proof of this remarkable, forthcoming volume. To 5,748 seniors in high schools, modified Binet tests were applied. Among the many interesting things revealed was the fact that 25 percent of the superior high school seniors had no intention of taking a college course, whilst from 65 to 70 percent of mediocre students had made definite plans to attend college. This would appear to indicate that the schools as at present conducted are not conserving their best intellectual material for future advancement and use to the State.

Estabrook reports that in an orphans' home of Indiana, in which the Stanford Revision of the Binet test was used on 140 children, 53 were of average mentality, 37 retarded, 12 probably mentally defective, and 38 definitely feeble minded. The latter illustration shows how grossly unjust the present system is in expecting this large proportion of sub-normals to measure up to the average standards in school work.

The writer has given these commendable examples of work in progress in the field of education, to show wherein it seems to me the trend is at fault. Goddard and Book, who may be characterized as distinguished pioneers in this field of practical research, are rendering inestimable service to the cause of education as well as to the sociological status of the community. Both argue with convincing power that this movement is one of vital and practical interest to democracy—giving to the child or young adult his rights for the development of the best there is in him.

If the writer seems presumptious in criticizing the methods pursued, it is not on the basis of experience as a pedagogue but on the ground of observation as a physician. Medical practitioners have an opportunity clinically to observe the mal-adjustment of children and youths to the work they are expected to do. In the light of this observation it has seemed to me the scope of the work thus far attempted is too narrow. It omits prime essentials if the largest service to the individual is to be achieved and the greatest good to the community attained.

In the main the suggestions offered are not new but as old as history itself. Only a change in method is proposed. I refer to the proper development in the growing individual not only of the mental but of the emotional and moral traits as well. Because organized religion has always maintained control of this field in the past, offers no justification on the part of scientists ignoring the subject, especially since it is fundamentally a physiological problem.

In discussing the question let it be granted that in man, a fine mentality constitutes one of the crowning ornaments of the human temple. But in this as in all other building, are not the foundation stones all-important—truthfulness, fidelity, courage, aspiration, faith, hope? On top of this foundation must there not be builded the brick of patience, cheerfulness, sacrifice, industry, frugality, friendliness and helpfulness? And how necessary that the whole be bound together by the cement of sound wisdom and poise!

So far as the materials entering into a well-rounded life are concerned, it seems to me the most practical classification for the purposes of education and moral training is to designate those materials as mental, temperamental and moral. By all means let the determination of mental levels so admirably begun go on; but do not wisdom and common sense tell us that it should go hand in hand with temperamental and moral evaluation? There is no valid reason why the latter characteristics of children and youths should not be scientifically worked out by means of tests just as the Binet test has been applied for the evaluation of mental capacity.

In further argument for this contention let me ask what person of collegiate training does not look back with amazement at the subsequent careers of his classmates? There was one who by all mental tests should have attained fame, now fallen by the wayside, held back by temperamental or immoral handicap. Another who was considered almost a dullard has progressed to fine achievement and large usefulness. The call of the age in educational circles is for a three-fold evaluation of children and youths by well devised tests—mental, temperamental and moral. In this way it should be made possible for the individual to find himself —to learn his weaknesses, capabilities and powers, to the end that he may use them for success and contentment. The purpose of education is not so much to feed into the human machine great quantities of knowledge which it can never thresh out, but to properly adapt the material to the mechanism. Equally important is it to make sure that the machine is in order and runs well.

Since this is essentially an educational problem it may be asked what relation has the physician to it? In reply it should be said that to us come the end-products of a faulty educational system—the social and vocational misfits, suffering from all manner of functional diseases—neurasthenia, hysteria, melancholia; failures in the life-struggle resulting in moral delinquency,

pauperism and crime. Medical wisdom looks upon much of this as bad mental and moral drift, which taken before the flood of failure, might have been kept out of the social stream. Here then is a newer and higher type of preventive medicine, in which we should and no doubt will in the years to come play a large part.

In connection with these reforms in educational methods, the physician should at least be advisory; and it is not too much to predict that in the near future, the physician-pedagogue will become a fixture in both the collegiate and public school system. The all-time health officer has already proved the value of his services in the public school system. Whilst as at present constituted, his function is to spy out infections and physical defects, the future will demand of him a larger and more difficult service. He will become the arbiter of mental, temperamental and moral capacities in children and youths, enabling their proper classification for educational work. Such men will be among the most highly trained educators and will command correspondingly high salaries. Thoroughly grounded in the fundamentals of medicine they will also require special training in public health and mental hygiene, comprehending both normal and pathologic psychology. It will be a field to stir the highest aspirations of the teacher and offer to him the rewards of great achievement in personal helpfulness.

LESLIE'S ON CHIROPRACTIC

There is no information which the public needs more, than that which will reveal the actual character of the claims made by certain medical cults—chiropractic in particular. This information is now forthcoming through a series of articles addressed to the public. Six articles entitled "Is It Chiro-*Quack*-Tic?" by Severance Johnson are now running in *Leslie's Weekly*, two installments having appeared in the issues for January 7 and January 14. The medical profession has from the beginning recognized the ridiculously unscientific character of the claims made by these cultists and has repeatedly shown that chiropractors are working directly against public welfare; that they attempt—and with some success—to break down medical practice laws, and frequently and openly violate these laws, aided and abetted in doing so by the so-called colleges that are grinding them out. But the public also has large financial interests at stake. Public funds are now being appropriated to help educate competent medical men. To conduct a medical school today costs several times what the institution receives from students' fees, and this deficit is being offset either by state appropriations or private endowments. The expense is being further added to by a gradually increasing provision for scholarships for deserving students who are unable to pay tuition fees. Are the benefits of these expenditures to be lost or dissipated through the spread of chiropractic? Because of the great expense involved in training competent physicians, medical schools conducted for profit have practically disappeared. But the place of the old, low grade, commercially conducted medical school is now being taken by chiropractic schools. Within a score of years, by charging maximum fees for a minimum of education, a long-haired but shrewd advertiser has amassed millions through conducting a chiropractic "college". A comparison of the brevity of the "professional" course and the common school education required for admission, with the ten or eleven years of high school, collegiate and professional instruction required to develop a competent practitioner of scientific medicine should at once show the inadequacy of the training obtained by chiropractors. The manner in which chiropractors disclaim the need of diagnosis and flout the fundamental sciences of chemistry and bacteriology should reveal to any intelligent layman the utter unreliability of chiropractic as a system of healing. It is high time that the public became fully informed in regard to the workings of this organized system of quackery, and *Leslie's Weekly* is rendering the public a great service by publishing the information.—*Journal of the A. M. A.*, Jan. 14, 1922.

TREATMENT OF INFANTILE PARALYSIS AS BASED ON PHYSIOLOGIC INDICATIONS

In order to restore function in a muscle, Henry O. Feiss, Cleveland (*Journal A. M. A.*, Jan. 14, 1922), has tried to apply function that is as consistent with the normal conditions of life as possible. This means not massage and electricity, which are only local in their effects, but the striving to obtain function through physiologic agencies. To be considered are voluntary effort, subconscious and reflex (induced) movements. It is not only important that these be applied as soon as possible, but also that they be applied strenuously and continuously.

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EDITORIALS

SOCIALIZED MEDICINE

It is evident that a very large proportion of the medical men in this country are not interesting themselves sufficiently in opposing the various plans, put forth by erstwhile leaders in our profession, which ultimately will lead to socialized medicine. The subject is a vital one, and has to do with the very life of the medical profession as a profession, aside from being of the utmost importance to the welfare of the people at large.

Perhaps it was to be expected that in this day and age, when there is so much social unrest among all classes of people, largely due to a misconception of existing conditions and the causes, that there also should be a little unrest in the medical profession. However, there always have been and always will be reformers, and men with visionary but impractical ideas, though at the present moment we are afflicted by too many of that kind, and it so happens that most of them are men occupying more or less prominent positions in the professional world. In fact, most of the Utopian but impractical schemes which work to the detriment of the medical profession and indirectly are harmful to the public, have not originated in the minds of laymen but are advocated and sponsored by prominent medical men who, if entirely honest in their convictions, have not analyzed the subject sufficiently, or, and this is more often the case, have personal ambitions to satisfy.

Some very good men see only the Utopian side of the question and are led to support modified forms of State medicine without realizing what it means and where it will end. No one objects to that feature of State medicine which has to do with public health work as carried on at the present time, even though we confidently believe that the work could be done better as a private enterprise not subjected to political jugglery. What should be objected to is any scheme, under whatever guise, that leads to the furnishing of all medical and surgical advice and service by Federal, State or municipal employees, which in its ultimate end will result in bureaucratic medicine with all of its vicious effects and in making the people wards of the State.

As an evidence of the trend of our leaders, we call particular attention to the attitude of the University of Michigan, which through its president, as reported in the daily press and in the *Illinois Medical Journal,* openly served notice to the medical profession that the University of Michigan virtually intended to take charge of or superintend the practice of medicine in Michigan. Following on the heels of this announcement, Dr. Hugh Cabot, dean of the Medical Department of the University, proposed a scheme for the establishment of what he calls "community clinics" in many sections of Michigan, to be conducted by and under the control of the Medical and Surgical Staff of the University of Michigan, a select few of the medical men of Michigan in the various communities served to be the nominal representatives of the University in the conduct of these clinics. As pointed out in THE JOURNAL, November, 1921, this starts out by creating caste in the medical profession, known to the public as such, which is bound to cause dissensions, but it also paves the way for the operation of a more comprehensive plan directly under the control of the State with all of the attending vicious results which inevitably would follow. In the end the medical profession loses out, private practice is largely if not wholly abolished, and we have bureaucratic medicine with all its ills! Those who are sponsors for the development of such a condition of affairs fail to appreciate the fact that when we get bureaucratic medicine there will not be any such thing as preference because of competency or integrity. It is a question of politics and pull, first, last and all the time. The man of ability, experience and initiative will be ruthlessly sacrificed on the altar of expediency. As a final act to the drama the poor suffering public pays the penalty by receiving poor service, impersonal attention if not studied indifference, so common to all public officials, and the people are reduced to mere wards of the State. We want none of it, but we will have it unless some of the leaders in the medical profession quit their everlasting advocacy of wild and impracticable schemes such as proposed by Dr. Hugh Cabot and his like.

UNETHICAL MEDICAL ADVERTISING

A newspaper clipping bureau furnishes THE JOURNAL with clippings or abstracts of personal news notes and articles of a medical nature from practically every newspaper in Indiana. Very naturally we are amused and at times provoked to note the frequency with which some Indiana medical men, a few of them prominent

and a limited number being officers of medical societies, permit their names to appear in the daily papers, often in repetition, concerning cases in which more or less so-called wonderful cures have been accomplished. In practically every instance the "write-up" gives indication of either having been written or inspired by the doctor whose name is mentioned. Lately THE JOURNAL office has been flooded with newspaper clippings and even letters calling attention to the most flagrant abuse of ethics by certain members of our Association who seemingly court newspaper advertising and notoriety.

It is conceivable that occasionally a doctor's name may appear in print in connection with a news note concerning some patient who has been given attention and the publicity occurs without the knowledge or consent of the doctor connected with the case, but such instances are rare and such newspaper articles do not contain accounts of rare operations told in technical terms nor refer to wonderful or miraculous cures. Furthermore, the average newspaper does not publish these glowing tributes without knowing that they will be acceptable. In fact newspapers are quite willing to conform to the wishes of the medical profession that advertising of such character be eliminated.

The fact of the matter is that this unethical newspaper advertising and cheap notoriety, if not sought, is sanctioned by some Indiana doctors, and it is time that our local medical societies call for an accounting. We fully realize that the rules of medical ethics are broken often by many of our medical men, and when we attempt the "cleaning up" process we ought to touch many subjects, but we might begin on newspaper advertising which is the most flagrant abuse of all at the present time. We again suggest, as we have suggested once before, that county medical society secretaries keep a scrap book and paste in it all of the newspaper clippings concerning members which appear to be an abuse of medical ethics, and ask the offending members for an explanation. If any guilty doctor refuses to explain or to show that he has been the victim of the kind of publicity of which we complain, without his knowledge or consent, then it is time to ask for his resignation from any reputable medical society and list him among the quacks where he belongs.

PROMISCUOUS ADOPTION OF MEDICAL INNOVATIONS

That the medical profession as a unit should be opposed to all schemes and proposals based on theory alone is expressed in an article by Edward H. Ochsner, of Chicago, and abstracted from the *Ohio State Medical Journal*. It is his belief that physicians should look with disfavor on all propositions:

1. *Which are not absolutely necessary.*
2. *Which introduce new evils.*
3. *Which advertise a few at the expense of the many.*
4. *Which appropriate without fair remuneration the skill, knowledge and time of the physician.*
5. *Which are palliative instead of preventative or curative.*
6. *Which further place medical men under lay supervision.*
7. *Which unduly interfere with the individualism of the medical man or are paternalistic.*
8. *Which have a tendency to pauperize the public and thus destroy the self-respect and self-reliance of the people.*

In the following paragraphs Dr. Ochsner briefly considers each one of the above eight tests:

"1. I believe that the medical profession of America renders better service to its fellow men than does any other group of citizens. I believe that the average American citizen has better medical care than the average citizen of any other country on the globe. If these two statements are true, what is the need of any of these new fangled schemes? Of course, we must have progress, but—

"2. Let us be very careful in adopting new schemes to see that they do not introduce new evils—evils which may be greater than those we are trying to correct. It is about time that we physicians look where we are stepping. Make sure first that we are going in the right direction before we adopt any scheme. Then if it proves good, adopt it, but let us not keep a-moving just for the sake of moving.

"3. Let us analyze the real fundamental reasons for the establishing of free clinics and dispensaries in Chicago as elsewhere. You will find four reasons —two are legitimate and two are not. The legitimate ones are to provide proper medical care for the sick poor, and to provide teaching material for medical students. The illegitimate ones are for the purpose of advertising a certain doctor or group of doctors, or to act as a feeder for a certain hospital. When we adopt new schemes let us be careful that they are for the benefit of the rank and file of the profession and the people and not for the aggrandizement of a few.

"4. We should also oppose every scheme which appropriates the time, skill and knowledge of physicians without just, fair and reasonable remuneration. Why? Because anything which continuously works to the disadvantage of the medical profession will in the end work to the harm of all the people of this country. Next to stability of government, honesty of administration and general intelligence of the people, the welfare of a nation depends more upon the quality of medical service which is rendered to its citizens than upon any one other thing. The longevity, health, efficiency and happiness of a people depend more upon the integrity, ability and industry of its medical profession than upon anything else. If these two postulates are true, and I think they are, then anything which hinders medical progress and which will have a tendency to prevent suitable young men from entering the profession is inimical to the best interests of the whole nation.

"5. We should oppose every scheme which is a palliative instead of a preventative or curative. It is an axiom in medicine and surgery and should be in political economy that a palliative must not be used continuously for any considerable period of time unless the case is hopeless. These people who want to reform everyone except themselves are continually

advocating the continuous use of palliatives and this is a serious economic mistake. We physicians have learned better. We use morphine only to bridge over a period of short stress or to alleviate a hopeless condition.

"6. We should oppose any scheme which has a tendency to further place medical men under lay political supervision and control. Medical men are being more and more dominated by laymen. This is a bad thing for the medical profession and a very serious obstacle to medical progress. Our hospitals are being more and more dominated by lay boards; our medical colleges are virtually completely under the control of laymen. Quite a number of our medical schools have deans who are not medical men, who cannot practice medicine in the state in which they are deans because they are not medical graduates. Another group of our medical deans while they are graduates from medical schools are unfit to practice medicine because they have had no practical experience in the practice of medicine. A very large group of our medical teachers are not medical men and while the old system of ownership of medical colleges by physicians had many objections, the new system has many objections which are even more serious. Our national, state and county institutions with their thousands of patients are controlled by lay boards. In Europe where Compulsory Health Insurance has been in force, this control is so menacing that medical progress has practically ceased. Frederick L. Hoffman is reported as having found a very amusing incident in his recent investigation of the workings of the Compulsory Health Insurance act in England. An English panel doctor prescribed fifteen capsules for a patient but the patient got well when he had taken nine. This physician was called before the lay board, censured and fined because the lay board claimed that he should have known that the patient needed only nine capsules for his recovery. How would you gentlemen like some lay board appointed by Hinky Dink, Bathhouse John, or John the Pow, or some other group of equally powerful politicians in this city, any one of whom has more political influence than all of you combined, to tell you just what you may and may not do in the practice of medicine?

"7. It is time, gentlemen, that the medical profession wake up. I am not a pessimist but the medical profession is today facing the most serious crisis that it has ever faced in the history of American medicine. Most of these schemes interfere with the individualism of the medical man. There can be no medical progress without individualism and without individual liberty. In political economy I believe in *voluntary cooperative individualism*, in other words *democracy* as opposed to *socialism and autocracy*. I am opposed to each and every one of the fifty-seven varieties of socialism because it interferes too much with individualism and dampens personal enthusiasm and incentive. I am opposed to autocracy for much the same reason.

"8. We should oppose any scheme which has a tendency to pauperize the public or which robs the people of their self-respect and self-reliance. Practically every eleemosynary institution is evidence of some fault in our economic system. It may be necessary now but our supreme effort should be to make all such institutions superfluous. We must have certain charitable institutions today but outside of charitable institutions for mental, moral, and physical defectives who are unable to provide for themselves, the time should come and must come and will come, if we progress in civilization, when there will be no other charitable institutions because charitable institutions, no matter how carefully managed, have a tendency to take from independence its proper pride and from mendicancy its salutary shame. Shakespeare said very well, as he always said very well:

" 'Who steals my purse steals trash; 'tis something, nothing;
'Twas mine, 'tis his, and has been slave to thousands;
But he that filches from me my good name
Robs me of that which not enriches him
And makes me poor indeed.'

"If Shakespeare had lived in this present day with all the innumerable welfare schemes in operation and contemplation he would have added in very much better English than I can command the following thought: 'And he who deliberately robs any man of his self-respect and self-reliance is infinitely worse than even the thief or the blackguard. He is an enemy to society and a menace to free institutions.' Free institutions depend upon self-respecting citizenship and many of these welfare schemes rob men and women of their self-respect and self-reliance.

"The activities of medical men, as medical men, can be classified into three functions: First, sanitation and public hygiene; second, the teaching of personal hygiene, and finally, the treating of disease. The first is distinctly the function of the state and the last is distinctly the function of the private practitioners of medicine."

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, suhc as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

COUNTY Medical Society Secretaries are asked to notify us of any alterations or corrections that should be made in the county Medical Society Directory on advertising page six of this number of THE JOURNAL. Unless this directory is correct, it is of no service, but it can only be correct through the assistance of the secretaries who heretofore have given us very little help.

THE zoologists of the United States Department of Agriculture have discovered that carbon tetrachloride is very effective as a destroyer and dispeller of intestinal worms in humans as well as animals. It is very effective in treating round worms, but quite recently it has been found effective in animals infested with hook worms and gives promise of also being effective in the treatment of hook worm in the human.

THE series of articles entitled "The Physician", by Dr. Frank B. Wynn of Indianapolis, which has been running in THE JOURNAL for over a year, probably will be completed with the February or March number. At the earnest solicitations of many who have read the articles, Dr. Wynn will publish his contributions in book form. The edition will be limited and we suggest that those who would like to have the book ought to place their orders with Dr. Wynn at an early date.

AT the Philadelphia session of the American College of Surgeons the medical anesthetists came in for a scoring at the hands of Dr. Charles H. Mayo when he indicated that some of the legislative acts sponsored by the medical anesthetists have not been in the interests of public health but to the advantage of the anesthetists. We are quite in sympathy with the idea of obtaining more trained anesthetists, but we are not in favor of legislation that is so drastic that it places the anesthetic responsibility entirely in the hands of those who are considered expert.

AT the annual meeting of the Indiana Chiropractors' Association held at Evansville in November, plans to raise the standard of the profession (?) were discussed, and a law creating a State Board of Chiropractic Examiners without any expense to the State was advocated. We fail to understand why it is necessary to go to such trouble. The chiropractors are practicing without let or hindrance at the present time, and what more do they want? A law will not help them any. Indiana should wipe out all restrictive laws pertaining to any feature of the healing art. If we can't enforce what laws we now have, why have more?

LESLIE'S WEEKLY has begun a series of articles on what is called in the title "Chiro-*quack*-tic". The articles are written by Severence Johnson, and it is claimed that his articles are based upon a neutral, comprehensive and painstaking inquiry concerning chiropractic, the new method of drugless healing. Inasmuch as the followers of chiropractic, now claimed to be over a million in number, have announced that they are determined to exterminate the regular medical profession, perhaps the series of articles by *Leslie's Weekly* will serve a purpose in acquainting the thinking public with the facts concerning this new species of quackery which is threatening the lives and health of the people and is such an arrogant piece of quackery as to merit the attention of the public. Perhaps there are other periodicals placing truth above financial gain that will be willing to discuss chiro-*quack*-tic.

INDIANA has many hospitals. A very limited number are approved. There must be something radically wrong with the rest, and they ought to brace up on their qualifications. Is it ethics, quality of work done, or lack of equipment and facilities? Whatever the cause, we are sorry that more are not up to the standard. According to the honor role of hospitals published by the American College of Surgeons, Indiana is represented as follows:

Indianapolis City Hospital, Indianapolis.
Methodist Episcopal Hospital, Indianapolis.
Robert W. Long Hospital, Indianapolis.
St. Anthony's Hospital, Terre Haute.
St. Elizabeth's Hospital, LaFayette.
St. Joseph's Hospital, Fort Wayne.
St. Margaret's Hospital, Hammond.
St. Mary's Hospital, Evansville.
St. Mary's Mercy Hospital, Gary.
St. Vincent's Hospital, Indianapolis.

SOME doctors take particular pleasure in being nastily independent. They think it is smart to take no suggestions or advice from anyone, and when they are asked to lend a hand in promoting something of direct interest to the medical profession as a whole they find delight in offering opposition openly, or silently through failure to cooperate. Is it any wonder that we do not accomplish more when it is so difficult to get the public or legislators to think along right lines in the consideration of medico-public questions? How often do we hear the statement, "You doctors never hang together"? It is true! Let us turn over a new leaf and show the public that we are a unit for the things that are right and for the best interests of all concerned. If we do this we will have more and better legislation for the maintenance of right medical standards, and we will head off the idiotic socialistic schemes which eventually will end in bureaucratic medicine.

IT may seem presumptuous, or perhaps unnecessary, for us to call the attention of our readers to the advertising pages, but there are some members of our Association who do not seem to appreciate fully the effort we are making to protect their interests by keeping them posted concerning trustworthy firms and trustworthy products. Every month we publish a list of the pharmaceutical preparations that have been approved by the Council on Pharmacy and Chemistry of the A. M. A., and we also call attention to some preparations of either questionable character or perhaps determined as frauds. Our advertising pages contain no announcements concerning preparations that are not thoroughly trustworthy. We invite patronage of the advertisers not alone because the advertisers are worthy of patronage but because

the advertising and the income it brings enables us to print a larger and better Journal.

WELL, Well! Michigan is waking up! The January number of the *Journal of the Michigan State Medical Society* publishes the Cabot controversy and editorials that appeared in our Journal and, in addition, a number of editorials and editorial notes of their own touching upon the efforts of erstwhile medical leaders to socialize medicine. With New York, Ohio, Illinois, Indiana, and now Michigan rising up in opposition to some of the schemes of the uplifters which, if carried to fruition, would destroy private medical practice, it may be that other states will see the light and join in the effort to not only protect but save the rank and file of the medical profession. As one thoughtful and analytical medical man has stated, "The average doctor has his face to the sun and does not see the overwhelming storm coming from behind and threatening to destroy him." We hope he will wake up before it is too late!

A YEAR ago we had occasion to call attention to the fact that some of the A. M. A. officers reserve all of the available rooms at the leading hotels in the city where the annual session of the A. M. A. is to be held, and then parcel out the rooms to their personal friends. As a matter of fact, this is a species of discrimination and unfairness that should be prohibited at future sessions of the A. M. A. The rule "first come, first served" should prevail, and while the A. M. A. officers may succeed in getting the cream of the hotel reservations, they could not prevent others from having at least a fair show of getting the accommodations desired. We appreciate the fact that there are other hotels in St. Louis where if one "stands in" with the Chairman of the Hotel Committee, reservations for the St. Louis session may be made, but it is the principle of the thing which arouses our ire. The A. M. A. is a large democratic organization, and it is not supposed to be run in the interest of a few.

CHIROPRACTORS of California are making a hard fight for recognition in that state. Last November they succeeded in filing initiative petitions qualifying to place on the 1922 ballot a measure to be known as the Chiropractic Examiners' Act which would create a state board of chiropractic examiners to license chiropractors. Signatures to this petition were secured largely by women and girls, hired especially for the work, standing on street corners and in front of public buildings, petitioning all passers-by, who, in accordance with the usual gullibility, were willing to sign anything which did not entail the spending of any money, without even making inquiry concerning the nature of the petition they were asked to sign. A similar measure was defeated at the last session of the California legislature, and since that time a number of prosecutions of chiropractors practicing without license have been made. It is imperative for the medical profession of California to acquaint their lawmakers with the true facts concerning chiropractic and its fraudulent claims.

THE Board of Trustees of the A. M. A. has up for discussion at the present time the question of the best methods to be employed to educate the public regarding medical matters. Within the next six months a thorough survey of the whole question will be undertaken in such a way as to bring to light all the facts. In connection with this matter the subject of State Medicine will be considered. One of the trustees has publicly stated that there are evils lurking in certain partially organized plans, particularly the diagnostic clinic, and the latter will come in for a thorough survey in order to determine whether diagnostic clinics are conducted for private gain or for the public good. The health center schemes, tuberculosis clinics, venereal clinics, and Red Cross undertakings will be included in this survey. That the survey will be exhaustive and the conclusions dependable is guaranteed by the character of the investigators. Let us hope that it will result in the recommendation of a constructive program that if carried out will safeguard the interest of the medical profession individually and collectively, while at the same time it insures the greatest good for the people served by the medical profession.

MANY prominent clinicians and especially a few well known syphilologists always have considered inunction as the most efficient method of giving mercury. The inunctions are not used by many because (1) they are dirty and disagreeable; (2) they are liable to lead to discovery; (3) and when the preparation remains on the skin for such a length of time it is more liable to set up a folliculitis. In an article entitled "The Clean Inunction Treatment of Syphilis with Mercury", from the department of dermatology and syphilography of the Cleveland City Hospital and from the Western Reserve School of Medicine, published in the *Journal of the A. M. A.*, December 24, 1921, the point is made that these objections may be overcome by cleansing the skin and removing the superfluous mercurial ointment after a thirty minute rubbing. From one to two drams of the mercurial ointment is rubbed into the skin every night, and a different place selected each night in order to avoid dermatitis. All superfluous ointment remaining on the skin may be

cleaned off immediately after the inunction without lessening the mercurial effect. The authors think this is a distinct advance in the therapy of syphilis.

WHILE much has been done to prevent cancer and other malignant tumors, the death rate is steadily increasing, as evidenced by the statistics recently issued by the government Census Bureau. The statistics seem to show that the white and colored races are equally susceptible to cancer, but both races seem less susceptible in the South than in the North. There were approximately five thousand more deaths in 1920 than in 1919 and eight thousand more than in 1918. The statistics seem to indicate the necessity for more wide-spread knowledge concerning the cancer problem, including the necessity for early skilled attention to any suspicious growth. Another interesting feature of the late federal census report is the announcement that the trend of the tuberculosis death rate is downward, the total number of deaths for 1920 being ten thousand less than for 1919, and twenty-two thousand less than for 1918. Unquestionably this lower death rate is due to the effects of a persistent propaganda to acquaint the public with the cause and treatment of the disease. Inasmuch as the total deaths from cancer are approximately seventy-three thousand, against one hundred thousand for tuberculosis, the need for dissemination of knowledge concerning cancer is now as great as for tuberculosis.

AT the conference of State Medical Society Secretaries held in Chicago during the month of November, Dr. Frank Billings, of Chicago, made some pertinent remarks concerning the necessity of considering the general practitioner and how to improve his status and his knowledge when discussing medical uplift schemes. Touching upon the economic side of the subject Dr. Billings said: "When you say it is not worth while to study medicine because of the economic conditions of today, it simply means that there are not enough young men today who possess the moral stamina. If a young man is qualified, if he is honest, if he is animated by a desire to give service, and will practice medicine, regardless of what he may get out of it in a financial way, he cannot keep patients away from him. We fear social medicine, and the tendency since the war has been for national organizations and for the government to favor paternal medicine, but it will never succeed. In the poorest hospitals in this country the average patient gets better treatment than the discharged soldiers have had. You may talk of any health work you please, but any scheme centralized in the federal government or centralized in the state will fail, for it is axiomatic that any work of value for the welfare of the people must be done by themselves and paid for by themselves."

WHAT can be accomplished in the way of developing a wide-awake and progressive medical society is demonstrated by the standing and work of the Muncie Academy of Medicine. A few energetic and enterprising medical men in Muncie decided that it was possible to instill new life into their medical organization, and at once began a campaign by preparing scientific programs that no doctor within a radius of fifty miles could afford to miss. Outside talent was invited, and prominent medical men from various sections of Indiana as well as from other states have contributed to the programs. The interest in the meetings has grown until the attendance probably ranks with the attendance at any of the medical meetings in the state, not excepting those of the Indianapolis Medical Society where the number of members ought to count for large meetings even in dull times. What has been accomplished at Muncie can be accomplished to a greater or less extent in every county in the state. All that is required is a little push and enterprise on the part of a few men, especially a wide-awake secretary, coupled with that spirit of unselfishness and optimism which banishes professional jealousies and the too oft encountered habit of so many doctors to shirk responsibility or, to use a slang phrase, "let George do it." Muncie is on the map medically, and it speaks well for this year's session of the State Medical Association which will be held in that city. Of far greater import is the scientific and social work being done for the benefit of the medical profession of Muncie itself. The example is worth following by other local medical societies in the state. In fact what has been accomplished in Muncie should shame some of the larger cities where little evidence of enthusiasm exists.

PERHAPS a compromise concerning the training required for nurses will settle our nursing problems in a fairly satisfactory manner. The suggestion made at the meeting on Hospital Standardization at Philadelphia is worth considering and it is that a two years' course should be made the minimum standard of nurses' training, but that provision be made for postgraduate work, with a special diploma for advanced training. At present nurses are compelled to study and labor diligently for three years after having achieved a high standard of general education. They are over-trained for nurses and under-trained for physicians. The foundational

requirements are too high for the average demand. On the other hand, in all fairness, provision should be made for the specialized nurses who assume added responsibility in positions such as technical assistants, or where there is opportunity for securing personal distinction. There is no need of lowering the standard of the nursing profession, but there is an urgent need of a provision for a very large number of nurses of the practical type not so technically trained as our present day graduate nurses, but possessing sufficient knowledge of every day nursing to make them of service to hundreds of thousands of patients in moderate circumstances who neither demand nor would accept charity, but are not able to pay the wages of the highly trained nurse of today.

THE tendency toward ultra specialization in medical practice is on the gain if we may judge by not only the increase in the number of specialists but in the lessening number of the good old fashioned general practitioners. Perhaps it is but natural to avoid the unpleasant features of the practice of medicine, and to desire comfort, leisure, regularity of habits for work as well as play, not to be obtained when engaged in general practice, and yet there are many occupations that are less pleasant as well as less desirable than the general practice of medicine. In fact the general practitioner, if he decides to do so, can be about as much of a master of his hours of work as a specialist who confines himself to office practice, and he not only is much healthier for the outdoor exercise entailed in making calls, but the growing recognition of his value on the part of the public insures an increased competence. There was a time when the specialist seemed to reap a harvest in remuneration, but it is a question if that time has not passed, for with the increase of competition, if we may call it such, incomes of many specialists have been dwindling. A recognition of the value of the general practitioner is seen in the attitude of some rural communities that now are advertising for general physicians with a guarantee of more than a living income. In fact the inducements offered by some rural communities in need of general practitioners assure a professional income that is greater than that obtained by many general physicians located in cities where living expenses are greater. Perhaps within the next few years there will be a more wide-spread recognition of the fact that we already have too many specialists and in consequence a tendency to medical astigmatism. When that time comes more medical men will realize that the well educated and well trained general practitioner is the king bee among medical men, and whose services are most sought and most appreciated by the public.

IT is regretted that medical laws in practically all of the States of the Union are trampled under foot in a ruthless manner. No doubt the regular medical profession is responsible for this as a direct consequence of the apathy that exists among doctors as a class when it comes to doing anything for the common good outside of purely professional work. Boards of medical registration and examination have been derelict in duty, but their dereliction has been due to failure on the part of medical men to cooperate in upholding medical laws by vigorously prosecuting all offenders. We would hear little or nothing of pseudo medical cults if the first transgressor had been prosecuted. Medical laws are for the protection of the public and not for the protection of the medical profession, but the public fails to appreciate the fact because those who know the dangers of quackery have failed to impart the information to laymen. At the present time we might as well be without medical laws, for in many of the states, and notably in Indiana, anyone can practice medicine, and to do it doesn't require even a passing acquaintance with a medical college or medical books. Quite recently in one of our Indiana cities a chiropodist operated a deformed foot, resulting in an infection which the chiropodist treated for some time, or until the patient, in disgust, consulted a regular physician. The same chiropodist arranged to operate, under general anesthesia, another patient with a deformed foot, and a dentist had agreed to give the anesthetic notwithstanding the fact that no effort was made to determine the physical condition of the patient who had a heart involvement which would greatly increase the risk even in the hands of an expert anesthetist. Men and women, even young boys and girls, without even an ordinary school education but possessed of a chiropractic diploma secured after a few weeks of indifferent schooling, are practicing upon the sick and disabled. The opticians with no medical training of any kind whatsoever are treating eye diseases, and the next thing we know the plumbers will be doing appendicitis operations. Under such conditions why have medical laws?

IN a letter to the *Journal of the A. M. A.*, December 10, 1921, Dr. Frank Billings of Chicago says some pertinent things concerning group practice, diagnostic and pay clinics. While recognizing that modern clinical medicine embraces such a vast field of knowledge that it is beyond the capacity of any individual to acquire the necessary learning, experience and skill to care efficiently for all patients, yet it is Dr. Billings' opinion that a painstaking general practitioner is able to make a correct diagnosis in a large majority of all patients with

the readily available small laboratory and instrumental equipment, and a thoroughly trained use of proper senses. A specialist may be eminently qualified in his own field of practice but usually he is professionally incompetent outside of it. Today the public suffers because many general practitioners neglect to make the examination and record all of the patient's condition, and in consequence the treatment and management given are slipshod, haphazard and often ineffectual. In fact one of the chief reasons for the growth of the cults is the failure of the general practitioner to give the best that is in him to the service of his patients. *As a matter of fact the application of all the refinements of laboratory and instrumental assistance in making a diagnosis are required in a small percentage of patients,* and just as long as the family physician fails to render the service that he can and should render, there will be a demand for group practice. The trouble with most group practice and diagnostic clinics is that they are conducted selfishly and for questionable purposes in the interest of the individuals forming the staff or the group. There is a distinct need of facilities for diagnosis and treatment by a qualified group of specialists for those patients who suffer from a small group of ailments. However, the sick public that requires this expert service is relatively small. The larger number requires the service of the good, honest and responsible practitioner who will give the best that is in him. If he does this he will not lack for patients or for financial reward.

In concluding his interesting communication Dr. Billings says, "Finally, to judge from known conditions in Chicago, there is a lack of the old fashioned, resourceful family physician in the larger cities. Many private practitioners whose chief practice a few years ago consisted of domiciliary visitation now refuse to give this real obligation to the public and compel their patients who are too ill to visit the office, to go to the hospital. Whatever excuse may be given for this disregard for the comfort, welfare and financial condition of these patients, one is obliged to conclude that it is due really to selfishness and laziness in the desire to escape the hardships experienced by a real family practice; the best and most valuable service a physician may give."

IT is evident that the medical profession at large is beginning to appreciate the dangers that threaten in consequence of the attitude of some of the leaders who are advocating or supporting measures that tend to socialize medicine. What we have had to say concerning the Michigan situation seems to have struck a responsive chord in many states, and it is well that a general uprising in the profession for the defense of inalienable rights and privileges should occur. As indicating the trend of affairs we publish, as requested, a circular being sent out by the medical advisory committee of the Ohio State Medical Association, which reads as follows:

MY DEAR SECRETARY:

As the fate of the Practice of Medicine is at stake, this plea is being sent to every County Medical Society in the United States. Kindly submit it at once to your society for consideration and action.

To Members of the Medical Profession:

The Public and Profession are being sold out to—

(1) Foundation control of "full time" medical education.

(2) Lay board domination and the "closed shop" hospital.

(3) Socialized state medicine, subsidized community health centers, and hospitals under political or university control.

(4) Legislative dictation of therapy and fees.

(5) Demoralization of medical standards by the expansion of cults.

(6) Exploitation of the specialties by lay technicians.

These menacing movements will succeed unless they are combated by a powerful and united opposition. Your so-called leaders are either openly fostering these destructive forces, or more subtly giving them full fling by a camouflaged neutrality.

The American Medical Association belongs to you and you are entitled to have it effectively protect your vital interests. Let your action on this nation-wide referendum carry your mandate.

In the present crisis it is up to every County Society to instruct all Delegates to the A. M. A. meeting at St. Louis, Mo., May 22-26, 1922, to vote for—

(A) A change of policy and leadership in the A. M. A. pledged to immediate abolition of the evils mentioned, and constructive protection of medical interests.

(B) The repeal of multiple representation and plural voting privilege by Section Delegates.

(C) The election of Trustees for a period of two years; five Trustees to be elected one year, and four the next, to prevent the Trustees from perpetuating oligarchical rule.

Unless there is a drastic change in the policy and leadership of the A. M. A. the public and profession at large will continue to be misled and misrepresented in the solution of the most pressing problems affecting public welfare and the practice of medicine.

The members of the Scientific Sections are already represented by the Delegates of their respective State Societies, and the voting of Section Delegates is multiple representation, and as such undemocratic and unfair. Unless this plural voting privilege is repealed, the 15 Section Delegates will continue to negative and outvote the Delegates of 15 State Societies having only one Delegate each.

At present three of the nine A. M. A. Trustees are elected each year for a period of three years. There is a proposal before the House of Delegates, introduced at the Boston meeting (1921) to reduce the number of Trustees to seven and have the term of office seven years. Unless the proposed election of Trustees for seven years is nipped in the bud, the A. M. A. will be relegated to "gang rule" for all time to come.

At the Boston meeting of the A. M. A. (1921) those representing the rank and file of the profession lacked only 7 votes of being in control of the House of Delegates, and would have been able to initiate

a policy of public and medical protection, if they had not been outvoted by the Section Delegates. In this connection the following editorial note of warning is of pertinent interest:

* * * "For the benefit of the large number of State Journals that exchange with us, we desire to call attention to the necessity of determining where the Delegates to the A. M. A. stand on many questions of vital interest to the welfare of the medical profession at large. We have had examples of what some of the leaders in the profession would do to us if they have their way. It is time to know something about the attitude of those whom we send to represent us at the great parent organization, which supposedly represents the voice of a very large majority of the medical men in this country. The trouble of it is we sometimes are betrayed, and if necessary, in order to have our wishes respected, our Delegates ought to go instructed." —(JOURNAL INDIANA STATE MEDICAL ASSOCIATION, November, 1921.)

This warning is all the more necessary since the Board of Trustees, at the Boston meeting (1921), reported that they had under consideration the advisability of the A. M. A. paying the expenses of the A. M. A. delegates. This simply means further subsidizing of the Delegates to control their votes and to thwart the interests of the rank and file. Each State Society that values representation by its own Delegates must take action against this political maneuver.

This is your opportunity of putting your power of attorney into the keeping of only such Delegates to the St. Louis meeting who will openly avow their stand on all vital matters, who will fight your battles and to whom your interests will be a sacred trust.

Self-protection is the first law of life. Act now!

Fraternally yours,
MEDICAL ADVISORY COMMITTEE,
(Signed) F. H. McMechan, M.D., Secretary.

DEATHS

R. B. PETRO, M.D., died at Franklin, Indiana, Friday, December 2, at the age of 78 years.

HARRY S. TONER, M.D., formerly practicing physician of Shelbyville, died November 19 at his home in Austin, Texas.

DAVID H. HAROLD, M.D., died November 30, 1921, at the home of his daughter in Westfield. Dr. Harold graduated from the Physio-Medical College of Indiana, Indianapolis, in 1889.

J. W. ARNOLD, M.D., of Columbus, died December 26, 1921, at the age of sixty-nine years. Dr. Arnold graduated from the Central College of Physicians and Surgeons of Indianapolis in 1885.

WILLIAM C. PROUGH, M.D., of Goodland, 46 years of age, died Tuesday, December 6, at the state asylum at Richmond, where he had been taken last May for treatment of a mental disorder.

CHARLES A. MCCLURE, M.D., died at his home in Eminence, December 28, 1921. Dr. McClure graduated from the Medical Department of the University of Nashville in 1899. He was 62 years old.

CHARLES WESLEY GORDON, M.D., died November 21, 1921, at his home in Fort Wayne, at the age of 69 years. Dr. Gordon graduated from the Fort Wayne Medical College in 1877 and from the Rush Medical College of Chicago in 1880.

SAMUEL R. WHITE, M.D., died at his home in Laud, November 28, 1921, at the age of 63 years. Dr. White graduated from the Fort Wayne Medical College in 1886 and was a member of the Whitley County Medical Society, the Indiana State Medical Association and the American Medical Association.

GREENLY V. WOOLLEN, M.D., age 81 years, died December 10 at his home in Indianapolis. Dr. Woollen was born in Marion county June 24, 1840, and graduated from the Bellevue Hospital Medical College in 1865. He was one of the founders of the Indiana State Medical Association, and served as its secretary from 1865 to 1875; served as president of the Indianapolis Medical Society; held the chair of professor of rhinology and laryngology in the old Central College of Physicians and Surgeons, Indianapolis; for several years was superintendent of the City Hospital, and served as physician to that hospital for 25 years. Since retiring from the active practice of medicine 15 years ago Dr. Woollen has been the medical director of the American Central Life Insurance Company. He was a fellow of the American Medical Association.

ALBERT CARL KIMBERLIN, M.D., Indianapolis, died December 14 as the result of a shooting accident while on a hunting trip. Dr. Kimberlin was born at Fisher's Station, 12 miles north of Indianapolis, January 21, 1863. He graduated from the Indiana Medical College, Indianapolis, in 1888, and served one year's internship at the City Hospital at Indianapolis, later becoming connected with the city dispensary and other Indianapolis hospitals. For several years Dr. Kimberlin has held the chair of Clinical Professor of Medicine in the Indiana University School of Medicine, and has been an active worker in the Indianapolis Medical Society and the Indiana State Medical Association, having served as both secretary and president of his county medical society, and as president of the State Association in 1913-1914. In addition to the above he was a member of the

Indianapolis City Board of Health for several years, member of the House of Delegates of the American Medical Association, and on the clinical staff of both the City and Methodist Hospitals. For a number of years his practice was devoted exclusively to internal medicine, and particularly cardio-vascular diseases, in which subject he was considered an authority throughout the country. The untimely death at the age of 58 years is deeply felt by the medical profession of this state, as he was loved and honored by all who knew him.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. GEORGE R. DANIELS has been elected mayor of Marion.

DR. M. F. HUNN has located in Elkhart, for the practice of medicine.

DR. SCOTT EDWARDS, of Greenfield, has gone to California for his health.

DR. RALPH BRUNER has located at Sellersburg for the practice of medicine.

DR. M. L. CURTNER has been appointed county physician for Knox County.

DR. J. W. MORR, of Albion, has taken up the practice of medicine in that city.

DR. R. R. COBLE has been made superintendent of the City Dispensary of Indianapolis.

MISS JEANETTE NELIGH has been made superintendent of the Marshall County Hospital.

DR. V. G. BLACK, formerly of Fishers, has taken up the practice of medicine in Noblesville.

DR. CLEON NAFE has been made assistant superintendent of the City Hospital at Indianapolis.

MISS LULU SUMMERS has been made superintendent of the Wells County Hospital at Bluffton.

DR. W. P. LAUE has returned to Gary for the practice of medicine after an absence of several months.

DR. CLINTON G. BECKETT, of Attica, was married on Christmas day to Miss Flo Hildebrand, of the same city.

DRS. W. D. GATCH and J. D. GARRETT have resigned from the board of public health and charities of Indianapolis.

DR. MILES F. PORTER, of Fort Wayne, was elected president of the Western Surgical Association at the recent annual meeting.

DR. PHILIP BOWSER has moved to Goshen, where he will take up the practice of medicine in partnership with his uncle, Dr. Irvin J. Becknell.

DR. C. S. WOODS, superintendent of the Methodist Hospital of Indianapolis, left December 10 for Colorado Springs, Colorado, on a leave of absence.

DR. L. M. REAGAN, formerly of Tipton, has located at Kokomo, with offices in the Darby Building, for the practice of medicine and surgery.

DR. S. M. COTTON, of Goldsmith, was elected secretary of Tipton County to take the place of Dr. L. M. Reagan, who has removed to Kokomo.

DRS. H. W. FITZPATRICK, MERLE HOPPENRATH and C. C. COTTON have been made members of the city board of health of Elwood for 1922.

DR. HERMAN G. MORGAN has been reappointed secretary of the city board of health of Indianapolis under the administration of Mayor Shank.

DRS. MAURICE LOHMAN and ERIC CRULL, of Fort Wayne, have returned from the East, where they attended the meeting of the United States Public Health Service.

THE Peru Chamber of Commerce has set aside $2,000 as the beginning of a fund to be used in the erection of a new building for the Miami County Hospital.

A BUILDING permit has been issued for the erection of a new south wing of St. Anthony's Hospital at Terre Haute. It is estimated that the addition will cost $75,000.

THE Jackson County Medical Society held a meeting Thursday, December 1, at the home of Dr. Gillespie, Seymour, Indiana. A paper was presented concerning infections from the teeth and gums.

AT the December 13 meeting of the Vigo County Medical Society the following officers were elected: Dr. A. F. Knoefel, president; Dr. C. M. Depuy, vice-president; Dr. A. M. Mitchell, secretary and treasurer.

DR. VIRGIL H. MOON presented the third of his series of lectures on "The Anatomy, Physiology and Pathology of the Blood and Circulatory System" before the Tipton County Medical Society at Tipton, December 5.

THE Cass County Medical Society held its regular meeting December 15 and elected the following officers for 1922: Dr. F. W. Terflinger, president; Dr. W. W. Holmes, vice-president; Dr. G. D. Miller, secretary-treasurer.

THE Adams County Medical Society held a meeting at Decatur, December 9, and elected the following officers for 1922: President, Dr. H. F. Costello; vice-president, Dr. J. S. Boyers; secretary and treasurer, Dr. Clarence P. Hinchman.

ONE hundred forty nurses passed the registration examinations at Indianapolis. There were one hundred forty-nine applicants. Miss Mildred A. Chaffee, of St. Anthony's Hospital, Terre Haute, headed the list with a percentage of 98.

DR. CHARLES A. BARNHILL, of Indianapolis, who makes a specialty of oral surgery, extraction of teeth and x-ray of head and teeth, announces the removal of his offices from the Hume-Mansur Building to 536-540 Bankers Trust Building.

DR. EUGENE L. BULSON, of Fort Wayne, left January 6 for Philadelphia to take a special course in bronchoscopy and esophagoscopy under Dr. Chevalier Jackson. He also will do some special postgraduate work on the eye while in the East.

AT the regular meeting of the Knox County Medical Society, held Tuesday, December 13, the following officers were elected to service in 1922: Dr. Charles S. Bryan, president; Dr. J. W. Trueblood, vice-president; Dr. D. H. Richards, secretary-treasurer.

THE following officers for the Grant County Medical Society have been elected for the coming year: President, Dr. Harry Williamson; vice-president, Dr. F. A. Priest; secretary-treasurer, Dr. B. C. Dale; censors, Drs. V. V. Cameron and M. F. Baldwin.

THE Randolph County Medical Society held a meeting Monday, December 12. A paper was presented by Dr. Reid, and the following officers were elected for the new year: Dr. C. L. Botkin, president; Dr. C. E. Milligan, vice-president; Dr. J. I. Robison, secretary and treasurer.

THE following officers were elected by the Goshen Medical Society at their regular meeting on December 23: President, Dr. L. H. Simmons; vice-president, Dr. H. W. Eby; secretary, Dr. H. E. Vander Bogart; treasurer, Dr. D. L. Miller; librarian, Dr. E. E. Ash; censor, Dr. I. J. Becknell.

THE Noble County Medical Society held a meeting at Albion, December 13, and the following officers were elected: Dr. A. C. Seymour, president; Dr. Lane, vice-president; and Dr. C. E. Munk, secretary and treasurer. A paper was presented on the subject "Pneumonia."

THE Clinton County Medical Society held a meeting at the home of Dr. A. G. Chittick, December 1, and the following officers were elected for 1922: Dr. W. C. Mount of Kirklin, president; Dr. J. A. Van Kirk, vice-president, and Dr. L. L. Harding, secretary-treasurer.

THE Wabash County Medical Society held its regular meeting, Thursday, December 15, and elected the following officers for 1922: President, Dr. N. T. Hale; vice-president, Dr. Browne; secretary and treasurer, Dr. Cripe. A paper was presented by Dr. M. F. Jordan on "Salpingitis".

THE Fulton County Medical Society held its annual meeting Friday, December 2, and the following officers were elected to serve during 1922: Dr. B. F. Overmeyer, president; Dr. A. E. Stinson, secretary-treasurer. Drs. King, Brown and Shafer were appointed to act as the program committee.

THE Howard County Medical Society held a meeting December 2, and the following doctors were elected as officers of the society for 1922: Dr. E. N. Bennett, president; Dr. F. S. Cuthbert, vice-president; Dr. W. R. Morrison, secretary-treasurer. A paper was presented by Dr. R. P. Schuler on "Four-Hour Feeding for Infants".

AT a meeting of the Indiana State Sanitorium Association, held at the Irene Byron Hospital, Wednesday, December 7, the following officers were chosen to head the Association: Dr. Alfred Henry of Indianapolis, president;

Dr. Gardner Johnson, of Evansville, vice-president; Dr. Eric Crull, of Fort Wayne, secretary-treasurer.

ATTORNEY GENERAL U. S. LESH declares that chiropractors cannot give certificates of physical disability which will excuse children from attending school under the provisions of the compulsory school attendance law. The attorney general declares that chiropractors are not physicians in good standing in this state and therefore chiropractors' certificates are not sufficient.

THE first examination of the National Board of Medical Examiners, under the new plan, will be held as follows: Part I, February 15, 16 and 17, 1922, inclusive; Part II, February 20 and 21, 1922, inclusive. Application blanks and circulars of information may be had by writing to the Secretary, Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

DR. JOHN MCCOY, a native of Spencer county, died December 20 in the hospital at the Soldiers' Home, Pasadena, California. Dr. McCoy was born in 1835, graduated in medicine from the Medical Department of the University of Michigan and served as surgeon with the 130th Indiana Infantry in the Civil War. Dr. McCoy had lived in Pasadena for 36 years.

THE Kosciusko County Medical Society met December 27 with a banquet at the Hotel Hays. Reports of the year's work were read, and officers for the ensuing year elected as follows: President, Dr. C. C. DuBois, Warsaw; vice-president, Dr. Paul A. Garber, Sidney; secretary-treasurer, Dr. O. H. Richer, Warsaw; delegate to State Convention, Dr. J. F. Young, Milford.

THE physicians and surgeons of Alexandria held a meeting at the Alexandria Hospital, December 1, and the following staff was elected: President, Dr. A. E. Otto; secretary-treasurer, Dr. H. C. Runyan; directors, Drs. J. E. Hall, J. J. Gibson, C. D. Schurtz, F. G. Keller and Mr. Harry Adams. Mrs. L. F. Schmauss was made managing director and superintendent of the hospital.

THE U. S. Public Health Service has felt it necessary to prevent the too optimistic and extravagant claims recently appearing in the newspapers in regard to the curative effects of chaulmoogra oil derivatives in the treatment of leprosy. While the use of the oil and its derivatives has resulted in a considerable number of apparent cures, it is as yet too soon to tell whether these cures will be permanent.

THE Kokomo Physicians' Telephone Exchange was opened Monday, December 12. The physicians' telephone exchange is a recent idea and is spreading throughout many cities. By this plan the telephone operators of this exchange will know just where every doctor is, whether he can be reached promptly or not and whether it will be advisable to call in another physician, in case of an emergency. The plan is proving very popular.

AT the regular meeting of the Delaware-Blackford County Medical Society held December 2, the following officers were elected: Dr. W. C. Moore, president; Dr. H. S. Buckles, vice-president; Dr. C. S. Bock, secretary-treasurer. A paper was presented by Dr. Byrl Kirklin on "Diagnosis of Bone Diseases". Plans were made for the entertainment of the Indiana State Medical Association, which will hold its annual convention at Muncie this year.

DR. W. D. CALVIN, of Fort Wayne, has announced the limiting of his practice to dermatology and genito-urinary diseases. Dr. Calvin formerly taught this subject in the old Fort Wayne Medical College, and was assigned this special work while in military service during the World War. He recently has completed special postgraduate work in Washington University, and is now limiting his practice, with offices at 312 West Wayne Street, Fort Wayne, hours 10 to 4.

THE McIntosh Battery and Optical Company of Chicago, one of the oldest and best-known x-ray, electro-medical and physical therapy apparatus manufacturers in the United States, has been reorganized with an increase of capital stock under the name of the McIntosh Electrical Corporation. Coincidental with this enlargement the Company has established distributing agencies in almost every state in the United States in the hands of local men. Mr. A. W. Zimmerman, of the Zimmerman Supply Company, 1331 Calhoun Street, Fort Wayne, has the agency for Indiana.

AT the annual meeting of the Indianapolis Medical Society, held January 3 at the Indiana Dental College, the following officers were elected for the ensuing year: President, Dr. Lafayette Page; first vice-president, Dr. George S. Row; second vice-president, Dr. Harry K. Langdon; secretary-treasurer, Dr. William A. Doeppers; librarian, Dr. Frank B. Wynn; members of the judicial council, for three-year terms, Dr. Ross Ottinger and Dr. Bernard Erdman; delegates to the State Association, Dr. E. F. Kiser, Dr. A. L. Marshall, Dr. J. A. MacDonald, Dr. C. H. McCaskey, Dr. John Sluss, and Dr. John Carmack.

THE Public Health Institute to be held at Indianapolis, February 13 to 18, inclusive, under the auspices of the U. S. Public Health Service, the Indiana University School of Medicine, and the State Board of Health, promises to be of unusual interest and value to the medical profession of the state. The lectures will be held in the auditorium of the Lincoln Hotel, Washington and Illinois streets, and will begin at 1 p. m., Monday, February 13, and close at 12 M., Saturday, February 18. In addition to the lecture course there will be a series of clinics on tuberculosis, and venereal diseases, an intensive laboratory course, and a Woman's Conference. There will be no fees or charges of any kind whatsoever. Full particulars concerning the program and other details may be secured from Dr. W. F. King, Director of the Institute, care of the State Board of Health, Indianapolis.

DURING December the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: The Abbott Laboratories: Neocinchophen-Abbott. Powers-Weightman-Rosengarten Co.; Mercury and Potassium Iodide-P. W. R. Schimmel & Co.: Oil of Cypress-Schimmel & Co. E. R. Squibb & Sons: Liquid Petrolatum-Squibb; Food Allergens-Squibb; Pollen Protein Allergens-Squibb; Animal Epidermal Extract Allergens-Squibb; Bacterial Allergens-Squibb. Winthrop Chemical Co.: Chaulmestrol. Nonproprietary Article: Chaulmoogra Oil.

CHANGE OF AGENCY: CRESATIN.—The Council has directed that the description of Cresatin (New and Nonofficial Remedies, 1921, p. 94) be revised to show that the name has been changed to Cresatin—Dr. N. Sulzberge, and that it is manufactured by the Intravenous Product Company of America, Inc.

THE GOLD CURE

An unfortunate man, possessed of a comfortable competency, evidenced various eccentricities, and so his loving relatives tenderly escorted him to a famous neurologist. The latter viewed the patient from different points of the compass, and in due course passed him on to a psychopathologist. This polysyllabic expert subjected him to an exhaustive analysis and presently shucked him off onto a psychiatrist. The latter had hardly more than begun his investigation when the patient lost the most of his money. Thereat his kin turned him loose, declaring that they had no more time to waste on a darned old crank. And he fell into the hands of a shabby plug of an unknown general practitioner, who gave him a few doses of bitter stuff and cured him for a dollar and sixty cents.—*Country Gentleman.*

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District Councilor	Number of Counties	1921 Membership	1922 Membership to Date	Percentage
First—Dr. Willis	7	176	87	.49
Second—Dr. Schmadel	7	149	52	.34
Third—Dr. Leach	9	130	22	.17
Fourth—Dr. Osterman	10	138	66	.47
Fifth—Dr. Weinstein	5	158	75	.47
Sixth—Dr. Spilman	8	150	11	.07
Seventh—Dr. Earp	4	425	11	.02
Eighth—Dr. Conrad	5	172	20	.11
Ninth—Dr. Moffit	10	253	67	.26
Tenth—Dr. Shanklin	5	151	18	.11
Eleventh—Dr. Black	6	191	112	.59
Twelfth—Dr. Morgan	8	241	72	.29
Thirteenth—Dr. Berteling	8	274	30	.10
	92	2608	643	

FORT WAYNE MEDICAL SOCIETY

The annual meeting and dinner of the Fort Wayne Medical Society was held Tuesday evening, December 20, at the Chamber of Commerce, Fort Wayne. Dr. E. M. Van Buskirk, president, presided over the following program: "Present Day Cardiology," Dr. George Hermann, Ann Arbor; "Methodism vs. Medicine" or "Can a Doctor Be a Christian?", Dr. Kent K. Wheelock; "The Medical Mystery," by "Mustapha Ali Ben Haggin". The program was interspersed with music.

The following officers were elected for the coming year: President, Dr. A. L. Schneider; secretary, Dr. Miles F. Porter, Jr. (re-elected); treasurer, Dr. E. E. Morgan (re-elected).

INDIANAPOLIS MEDICAL SOCIETY

Meeting of Dec. 15, 1921

At this Kimberlin memorial meeting addresses touching upon the life and work of Dr. A. C. Kimberlin were presented. Dr. Frank B. Wynn gave the following:

"Upon this occasion I am weighed down not only by grief at the loss of a dear friend but by the consciousness that my words must express the depth of feeling which stirs your hearts. A nobleman from our ranks has been cut down, before his allotted time. The tragedy of his going appals us and its suddenness reminds us of the uncertainties of life.

"At this time whilst our memories hark back to the intimacy of our mingling with him—his devotion to this Society; his frequent and enlightening participation in its proceedings; his exhaustive and informing articles upon medical subjects; his fine and satisfying grasp of clinical medicine; the wisdom of his counsel, the goodness of his heart, the gentleness of his spirit, the sincerity of his friendship and the greatness of his soul—will all be cherished by us as a precious heritage.

"Resolutions are formal and cold; my words wholly inadequate to express our affection and appreciation of him who was of us, and for us; a leader whom we could follow, safely, confident that he would show the way; a physician who exalted the scientific, the clinical and spiritual ideals of medicine, a man to the core, who sought ever to be his brother's keeper; dutiful in his obligations to the community; true to his own flesh and blood. 'We shall not soon look upon his like again.'

"It were perhaps better at this time not to particularize upon incidents of his life; for where would the narrative end? We would emulate his life and example. This we may do better if, instead of many incidents, we stress two of the outstanding traits of his career. It will be remembered that at the last feast of the Great Physician, there sat amongst the twelve Apostles, Luke the beloved physician. He utters these stately words: 'No man having put his

hand to the plough, and looking back, is fit for the kingdom of God.' And was this not always true of our beloved colleague? Steadfastness (I like the word), unswerving steadfastness characterized his whole life. Even in his country-boyhood life, intelligent, affectionate parents would have had him follow in their footsteps on the farm, but his eyes were fixed upon the practice of medicine—that was the goal for which his heart yearned, and never did he deviate from that resolution. With the same determined enthusiasm he studied medicine in the Indiana Medical College, winning distinction as a thorough student; during his internship at the City Hospital, his diligence and thoroughness in clinical work, won a devoted and life-long friendship with every member of the Staff; or was it as teacher of anatomy, or Professor of Clincial Medicine in the School of Medicine, his thoroughness and eagerness to know the whole truth, gained the confidence and admiration of students.

"He was big enough to recognize and deplore his own shortcomings. It was with him a matter of extreme regret that he had not received a collegiate education. Here again his steadfastness was shown in his struggles to realize higher ideals. For two years after his graduation he took systematic private tutoring in cultural subjects. This training was apparent in his writing and in his discussions of medical papers. The Professor of Medicine in one of the oldest medical colleges in the West once observed to me concerning a discussion Dr. Kimberlin had given in a national meeting, that it was one of the finest he ever heard. His fluency, grasp of the subject, orderly arrangement of his ideas always made his friends feel at ease and proud of his efforts.

"His career as a general practitioner was triumphal, not merely in the matter of business volume, but in the larger sense, that the high quality of professional services which he rendered, merited and received devoted approval. He was an ideal family doctor. Feeling that the stress of his multiplying responsibilities was threatening inroads upon his health he resolved upon devoting his energies to a more limited field, by his studies and writing seeking to justify a claim for ability as a consultant in both the professional and public mind. Here again came into play his ceaseless industry and unwavering steadfastness to medical ideals. Whilst in his work as an internist he brought the tremendous aid of his vast clinical experience, he never allowed this to befog his vision for other diagnostic helps. He was always eager to collaborate. The large consultative practice which he did bore eloquent testimony to his ability, the wisdom of his counsel, and the enlightening and helpful attitude which he always showed toward his confreres. His election to the Presidency of this Society and the State Medical Society, was an expression of the esteem and affection in which he was held by the profession throughout the State.

"An incident occurring the past summer will illustrate his ability and gift to handle himself creditably on public occasions. At a medical banquet of two hundred and fifty the speaker of the evening was one of the most distinguished surgeons of the whole country. Since the meeting was held in a smaller Indiana city he did not prepare for the occasion. Arriving late he looked in upon this fine assemblage of men and exclaimed 'Why, I was not counting upon an occasion like this. I am not prepared.' His audience soon found that his statement was correct, for he rambled most disconnectedly and disappointingly. The presiding officer noting the presence of Dr. Kimberlin in the back of the hall, suggested that it might be appropriate to hear from an internist on the subject which the surgeon had presented. Dr. Kimberlin never in his life appeared to better advantage. In his clear, fluent, and incisive manner he talked for twenty minutes, commanding the rapt attention of those present. The unanimous opinion of all present was that it had been a great evening, but that the outstanding address had been Kimberlin's.

"In the Book of Books we read 'The grass withereth, the flower fadeth.' And whilst Isaiah thus wrote figuratively of life, in the case of our colleague I should prefer to think of him as a tree. Indeed I should liken him unto the 'Old Oak Tree' under which I played as a country lad—a great white oak towering 200 feet into the air, five feet in diameter, standing there alone, strangely left from its primeval brothers. Like our dear friend who has gone, how steadfast it had been through the two centuries of its existence. It stood as a sentinel to direct travelers for miles around. Benevolence it showed to the hornets' nest which hung from a bough; protection to the chipmunk which hid itself securely under the deep roots; kindliness to the trumpet vine which clung about its trunk; refuge to the distracted quail which secluded itself among the leaves; comfort to the harvest laborers who rested in its shade at noontime; merriment it gave in the swing which hung from its great arm; patience it taught me, for had I not seen it at its job my whole life through; courage it taught me, for had I not seen it swayed in the surging blasts of winter. The old tree had taught me all the worth-while attributes of life—that the greatest thing is to live to the full of one's abilities, to love and to serve. Figuratively speaking A. C. Kimberlin was an 'Old Oak Tree'. And like this monster of the primeval forest he came to a tragic end. Lightning claimed the one, tearing it into ten thousand splinters, as did accident fell the other.

"The Creator has claimed them both. They are not dead. It was worth while to have known this man. Let us think on his life."

Dr. W. N. Wishard, who was prevented from attending the meeting, sent a communication which was as follows:

Indianapolis, December 15, 1921.

Officers and Members of the Indianapolis Medical Society, Indianapolis, Ind.

Gentlemen:

I regret very much that a temporary illness will prevent my being with you tonight when you meet to do honor to the memory of one who has done so much for this organization.

I first met Dr. Kimberlin in 1886 when he was attending the old Medical College of Indiana. Our acquaintance was deepened and strengthened by the fact that I was his preceptor during his medical school work.

The characteristics which were so marked in his student days have become more noticeable as the years have passed. I recall very vividly today his appearance and the boyish frankness, kindliness and eagerness for work when he first came to the City Hospital to see me during the latter part of my administration as Superintendent. He used to come out to the hospital on his velocipede, one of the wheels of which was very large and the other quite small, but which maintained sufficient speed to enable him to attend to his medical school work and yet spend considerable time at the hospital.

Every member of the medical school faculty and every one in any official or professional capacity at the City Hospital dearly loved "Allee Kimberlin" as he was affectionately called by all. The unusual candor and sincere sympathy and interest in his patients that marked his early career was accompanied by

an eager scientific interest and effort in their behalf. He has always been a student and a wonderfully efficient and industrious one.

I recall his coming to my office one day not long after he had left the hospital and stating that he had been keenly conscious of his general educational deficiencies at the time he entered the medical school. He asked me to suggest a teacher in history and literature, which I was glad to do, and he pursued his private studies in this direction for two or three years, until his practice became large enough to occupy all his time.

He held at the time of his death a very enviable position. To his professional confreres, to his students and to his patients and to the public hospitals of Indianapolis he has been a wise counselor and loyal friend to whom we have all turned with hope and confidence. I know of no one who can quite take his place. We are all richer and better for having known him.

As a consultant in internal medicine the profession of Indiana and adjoining states will feel his loss almost as keenly as we do. I never knew a physician to call him in consultation or meet him for the first time who did not entertain for him an unusual quality of respect and confidence. Most of them felt that he was already an old friend and he became a fast friend of the great majority.

He was tolerant of the opinions of others and yet clear and firm in his own views. I was early impressed with his perfect candor when a medical student, and later as a young practitioner, and in more maturer years I have never known him to fail to frankly declare himself a sincere believer in the Christian religion. Neither have I ever known him to criticize the religious views of others.

As a Christian gentleman, an unusually wise and efficient physician, as a personal friend and a rare type of citizen, he stood to those of us who knew him intimately somewhat in a class alone, or at least as one who blended the elements of goodness, gentleness, greatness and love in a rare way.

Personally, I cannot trust myself to speak of what his passing means to me and can only say

"Dear, dear friend, hail and farewell."

DECATUR COUNTY

At a regular meeting of the Decatur County Medical Society, held December 19, 1921, the memorial committee presented the following resolutions concerning the death of Dr. A. C. Kimberlin, of Indianapolis:

Greensburg, Indiana, Dec. 19, 1921.

The memorial committee of the Decatur County Medical Society on the death of Dr. A. C. Kimberlin, presents the following report.

Words fail adequately to express the regret and sorrow felt by the Decatur County Medical Society over the tragic and untimely death of Dr. A. C. Kimberlin.

Dr. Kimberlin was frequently called to Greensburg and vicinity as a consultant and had the respect and confidence of members of this society, as well as the laity. He was ever courteous, kind and sincere, leaving a ray of hope and comfort. Dr. Kimberlin possessed an unusual degree of skill, and was ever willing and ready to use such skill for the relief of suffering humanity. We feel that his place cannot be filled, but we submit to the will of the Great Physician who doeth all things well.

Resolved, that the society extend its heartfelt sympathy to the widow of Dr. Kimberlin and relatives, with a prayer that an all wise Providence comfort, protect and care for them in this their great affliction.

Resolved, that a copy of these resolutions be sent to the widow, The Journal of the Indiana State Medical Association, and that they be spread on the records of our local society.

D. E. DOUGLAS.
I. M. SANDERS.
P. C. BENTLE.

PUBLIC HEALTH INSTITUTE AT INDIANAPOLIS, FEBRUARY 13-18, 1922.

The U. S. Public Health Service, in co-operation with the Indiana State Board of Health and the Indiana University School of Medicine, has arranged for a Public Health Institute to be held in Indianapolis for the entire week, beginning February 13, 1922. This institute is one of a series of such institutes to be held in twenty-four of the larger cities of the United States in order that the advantages of such an institute may be brought within reasonable reach of every section of the country. These institutes will be open to every person who may care to attend, without charge, and will furnish a splendid opportunity for physicians, not only to "brush up" and broaden intellectually, but also to renew and extend acquaintances throughout the state and meet some of the good men from other states. Health officers, nurses, social welfare workers and all others interested will have advantage of a short, intensive course covering the various phases of public health and social welfare work under the leadership of experts in every line.

For the Indianapolis Institute the lecturers and their subjects will be as follows: Dr. Wm. C. White, of Pittsburgh, on "Tuberculosis"; Dr. Rachael S. Yarros, of Chicago, on "The Delinquent"; Dr. Frederick Green, of the American Medical Association, on "Health Education"; Dr. William N. Wishard, of the Indiana University School of Medicine, on "Gonorrhea"; Dr. Frank W. Cregor, of the Indiana University School of Medicine, on "Syphilis"; Miss Jessie Binford, of the Interdepartmental Social Hygiene Board, Washington, on "Protective Social Work"; Dr. A. T. McCormack, State Health Commissioner, of Kentucky, on "Administrative Problems in Public Health"; Dr. Wm. A. Evans, of Chicago Tribune, on "The General Communicable Diseases"; Dr. Charles P. Emerson, Dean of the Indiana University School of Medicine, and Dr. Frank S. Hutchens, Indiana University School of Medicine, on "Mental Hygiene."

In addition to the above there will be lectures on child hygiene, nutrition in health and disease, sanitary engineering, industrial hygiene, etc. Dr. Alfred Henry, of the Indiana University School of Medicine, has arranged a series of tuberculosis clinics, at which the modern methods of examination and early diagnosis will be demonstrated. A series of venereal disease clinics will be given in connection with the Indianapolis Venereal Disease clinic. Dr. Virgil H. Moon, bacteriologist for the Indiana University School of Medicine, and Dr. William Shimer, Superintendent of the Laboratory of the State Board of Health, have arranged an intensive course in serology, bacteriology and microscopy for the benefit of physicians and others interested. In addition to the regular daily program, and program of clinic and laboratory demonstrations, there will be a public meeting each evening. Dr. Evans, Dr. Emerson, Dr. Green, and others will address these public meetings on subjects of general interest to the public.

The meetings of the Institute will be held in the Auditorium of the Lincoln Hotel, which has a seating capacity of 700 with rooms for committee and group meetings and is admirably adapted to the

purposes of the Institute. It is believed that the program of this Institute should appeal to health officers, physicians, social workers, nurses and all others interested in public health and public welfare, not only in the state of Indiana, but in surrounding states as well. The interest already shown indicates a large attendance at the Institute. Dr. W. F. King, Assistant Secretary State Board of Health, is Director of the Institute, and will be pleased to give personal attention to any inquiry concerning the Institute.

MUNCIE ACADEMY OF MEDICINE

At a regular meeting of the Muncie Academy of Medicine the following memorial resolutions concerning the death of Dr. A. C. Kimberlin, of Indianapolis, were adopted:

In the drama of life the physician plays a leading role. From the dawn to the eventide the issues of life are his care and concern. To him is committed the holy rite of lifting the veil on life at birth, and he is there when the curtain falls on the closing scene. His are the first hands to touch the new born and the last to minister to the stricken and dying.

To be highly endowed by nature, well trained, fully equipped and wholly dedicated to such a mission is to be ordained as a coworker with God in the conservation of life and the promotion of human health and happiness. It is at once a mission and a ministry which should inspire the highest motives and the fullest consecration to service. He most truly lives who best loves and serves his fellowman.

Thus lived, thus labored and in high degree attained, did the subject of this memorial, our friend, comrade and coworker, Dr. Albert C. Kimberlin. He, whom we all knew and loved, and whom we mourn tonight, was so much a part of us he seemed to belong to us. For many years his contributions to our medical organizations had been frequent and inspiring. In his personal contact, as in his professional relations, he happily exemplified the high standards and ideals he so ably advanced as teacher and lecturer. Therefore, be it

Resolved by the Muncie Academy of Medicine, in regular meeting assembled, that in this expression of sorrow in the tragic and untimely death of Dr. Kimberlin, we voice a sense of personal loss shared by a vast throng of friends and coworkers throughout the state.

Resolved, that in his death at the very zenith of his powers, scientific medical teaching has lost an earnest, fluent and clear thinking exponent, and the practicing physician an able counselor. And be it

Resolved, that to those with whom he mingled in daily contact or frequent association,—the church, the fraternal and benevolent organizations with which he fellowshipped and to whose efficiency he so ably contributed, we extend that sympathy which finds comradeship in sorrow. And be it further

Resolved, that to his grief stricken home, to the members of his household, whose loss is too personal and whose sorrow is too sacred for us to share, we offer the benediction and consolation of the memory of a noble life, nobly lived, to full fruition and "crowned with glory and honor." And be it finally

Resolved, that a copy of this memorial be furnished his family and to the various institutions and organizations of which he was a member and to the various medical periodicals for publication, and that it be made a part of the record of the proceedings of this Academy.

W. W. WADSWORTH.
F. G. JACKSON.
WILL C. MOORE,
Committee.

December 15th, 1921.

GRANT COUNTY

The Grant County Medical Society met in regular session at Marion on Tuesday evening, December 20, at which time the annual election of officers was held, with the following results: President, Dr. Harry Williamson; vice-president, Dr. V. V. Cameron; secretary-treasurer, Dr. B. C. Dale.

NETTIE B. POWELL, Sec'y.

KNOX COUNTY

The forty-sixth annual meeting of the Knox County Medical Society was held at the Y. M. C. A., Vincennes, December 13. A banquet was served, following which a 5,000 foot moving picture film of obstetrics and gynecology, by Prof. Werthein and Prof. Weibel, of Vienna, Austria, was shown. Seventy-seven physicians were present, including guests from Knox, Daviess and Sullivan counties, Indiana, and Lawrence and Wabash counties, Illinois.

Officers for the year were elected as follows: President, Dr. Chas. E. Bryan, Vincennes; vice-president, Dr. J. W. Trueblood, Monroe City; secretary-treasurer, Dr. D. H. Richards, Vincennes; censor, Dr. N. E. Beckes, Vincennes.

Adjourned.

D. H. RICHARDS, Secretary.

MONTGOMERY COUNTY

At the meeting of the Montgomery County Medical Society held at Crawfordsville, December 20, the following officers were elected for the ensuing year: President, Dr. William T. Gott, Crawfordsville; vice-president, Dr. T. Z. Ball, Crawfordsville; secretary-treasurer, Dr. B. N. Lingemann, Crawfordsville.

A. L. LOOP, Sec'y.

HAMILTON COUNTY

At the December meeting of the Hamilton County Medical Society the following officers were elected for the coming year: President, Dr. K. C. Hershey; vice-president, Dr. C. R. Elfers; secretary, Dr. W. F. Baker.

After the election Dr. Karl R. Ruddell, of Indianapolis, presented a paper on "Toxic Goitre," dealing with the diagnosis and treatment. An interesting discussion followed the reading of the paper.

W. F. BAKER, Sec'y.

JASPER-NEWTON

The Jasper-Newton County Medical Society announces the following program for the coming year: January—Host, Dr. E. Besser, Remington; subject, "Pathology and Diagnosis of Different Types of Pneumonia," Dr. M. D. Gwin and Dr. W. C. Mathews. February—Host, Dr. C. C. Bassett, Goodland; subject, "Influenza, Colds, Grip, and Similar Infections; Diagnosis and Treatment," Dr. Alfred Ranier and Dr. T. E. Collier. March—Host, Dr. T. E. Collier, Brook; subject. "Muscle and Joint Infections. Acute Rheumatic Fever, Rheumatoid Arthritis; Etiology, Diagnosis, Symptoms and Treatment," Dr. G. D. Larrison, and Dr. C. E. Triplett. April—Host, Dr. E. C. English, Rensselaer; subject, "Cerebral Hemorrhage. Embolism and Thrombosis; Varieties, Symptoms and Treatment," Dr. Frank Kennedy and Dr. E. Besser. May—Host, Dr. M. D. Gwin, Rensselaer; subject, "The Tonsil," Dr. J. G. Kinneman; "Treatment," Dr. I. M. Washburn. June—Host, Dr. Frank Kennedy, Goodland; subject, "Obstetrics; Care of Mother Before Delivery," Dr. G. H. VanKirk; "Method of Delivery," Dr. C. C. Bassett. July—Host, Dr. G. D. Larrison, Brook; subject. "Typhoid Fever." Dr. L. H. Recher; "Colon and Other Infections," Dr. E. C. English. August—Host, Dr. W. C. Mathews, Kentland; subject, "Diabetes, Etiology and Symptoms,"

Dr. F. L. Morehouse; "Treatment," Dr. C. E. Johnson. September—Host, Dr. A. R. Kresler, Rensselaer; subject, "Fractures, Neck of Femur, Colles, and Potts," Dr. E. N. Loy; "Treatment," Dr. H. S. Hewitt. October—Host, Dr. Alfred Ranier, Remington; subject, "Eczemas of Nursing Babies," Dr. E. S. Gibson. "The Tineae, Impetgo Congagiosa," Dr. F. H. Hemphill. November—Host, Dr. I. M. Washburn, Rensselaer; subject, "Diagnosis of Common Infections of Eye," Dr. A. R. Kresler; "Treatment," Dr. J. T. Martin. December—Host, Dr. G. H. Van Kirk, Kentland; subject, "Dyspnoeas," Dr. J. G. Kinneman. Annual election. Officers of this society are, president, Dr. Alfred Ranier and secretary-treasurer, Dr. O. E. Glick.

BENTON COUNTY

The Benton County Medical Society met at the home of Dr. W. H. Taylor, November 8, in regular session, and elected the following officers for 1922: President, O. M. Flack, Boswell; Secretary, J. L. Morehouse, Fowler.

All members were present except three. The society voted to meet bimonthly during the year 1922.

Dr. Mac Gillavry presented a very interesting address on Purpura Hæmorrhagia and Dr. Atkinson reported an interesting method of eliminating diphtheria from schools. Dr. Hubbard reported the birth of an acephalus delivered by Dr. Taylor and himself.

Adjourned. W. H. TAYLOR, Secretary.

TIPPECANOE COUNTY

After a 6:15 p. m. luncheon at the Hotel Lahr, Lafayette, on November 29, Vice-President Ruschli called the regular meeting to order. Minutes of previous meeting read and approved without change.

Dr. Crockett read a paper on "Resumé of Three Clinical Cases from a Diagnostic Standpoint". Cases typical of many that the general practitioner sees so often—robust and healthy appearing people, but complaining of distressing bladder symptoms.

First Case:—Perfect physical appearance; married; two months pregnant. Bladder symptoms: Frequent micturition, tenesmus, pain, bloody urine; no backache. First attack three and one-half years ago. Aggravated at each pregnancy. Cystoscopy negative except three small blebs near trigone, and right ureteral orifice red and spurting red urine, which carried tubercle bacilli, associated with colon bacilli. Pain not dominant symptom of tubercular kidney until bladder is affected; pain in not over thirty-five percent; micturition at night only after bladder involved. Nephrectomy performed and all bladder symptoms better.

Second Case:—Mrs. H. S. Seen first, April, 1921. One child. Physical appearance good, well nourished, pendulous abdomen. Complains of usual distress—bladder symptoms. First attack three years ago, repeated at long intervals; lately very severe. Urine free from blood and pus. Not up at night, as a rule. Pain increases at menstrual period, also when on feet. Cystoscopy revealed no pathology, excepting a little bagging in of bladder in region of right lower quadrant, and few small elevated points in this region. Uterus slightly anteflexed, but not fixed by adhesions. Applied properly fitting abdominal support, and distress relieved.

Third Case:—Well nourished, general physical condition good. Bladder trouble gradually developed from one year ago. Micturition frequent both night and day; pain during passage, and burning after. Never any pus or blood in urine. Tender on deep suprapubic pressure. Married, but no pregnancy. Trouble commenced one year after laparotomy with removal of appendix, and left ovary and tube. External examination of genito-urinary negative. Cystoscopy: Lower left half of bladder, three small irregular ridges with thickening and reddening of subjacent mucosa involving the trigone. Digital palpation through vagina over this area elicited pain or tenderness. Vesicle surface at outlet irregular. Symptoms aggravated at night, but not at time of menstruation,—trigonitis, but the cause not yet determined.

Discussion:—VAN REED: Case of severe chills and fever with symptoms referable to kidney region. Urine from right kidney showed bacilli that were suspicious. Nephrectomy, and tubercle bacilli proven.

Another case, forty-two years old, severe pain coming on suddenly, radiating toward bladder. Relieved by morphine, hypodermatically, followed by passing large quantities of urine.

RUSCHLI:—Case, female aged sixty years. Incontinence; hysterectomy by another surgeon. Cystoscopy revealed nothing. Demonstrated urine was coming out of vagina—ureteral fistula into vagina. Anastomosed ureter into bladder. Successful.

DR. LAIBY: Quoted where teeth and tonsil infections were prone to cause kidney infections. Experiments demonstrated these infections had an affinity for genito-urinary tract. Colon bacilli demonstrated to be only a secondary contamination.

SCHREIBER: Frequently found pendulous abdomen cause of bladder symptoms. Binder relieved.

WESTFALL: Does increase of uric acid in blood have a tendency to produce nephritis?

DR. HUNTER: Blood chemistry may detect beginning nephritis before analysis of urine demonstrates it.

Dr. Crockett in closing stated that every case of persistent urinary symptoms has a source somewhere, if it can be located. Sometimes the most obvious source is overlooked.

Dr. Chenoweth reported a case of recurrent appendicitis; the first occurring ten years previously. Last attack characterized by intense symptoms accompanied by leukopenia—three thousand whites. Hurriedly operated and in two days the leukocytes were ten thousand; made an uneventful recovery.

DR. KEIPER: Often see leukopenia in grave mastoid cases, so cannot rely upon laboratory alone, but have to study all cases from the general symptoms as well.

DR. MCCLELLAND: Had leukopenia in the case of a hand infection, rapidly grew worse and died.

DR. IKENS: Reported three cases of median nerve injuries, two by direct force, and one by penetrating wound. All presenting themselves for treatment some time after injury. Both sensory and motor functions injured. No trophic disturbance in the direct force cases, but in the penetrating wound in which the nerve was severed there was marked trophic disturbance. In the two pressure or force cases, the sensory function returned first, as usual, and the motor is being gradually restored; still under treatment. In the case of the severed nerve, part of the area of distribution was hyperesthetic and part anesthetic. Cut down, and with difficulty found the ends (the distal one being enlarged, cauliflower shaped), and sutured them. No infection and expect good results, but will have to wait six to twelve months yet because results are always slow.

DR. HUNTER, pathologist: The enlarged end of nerve found by Dr. Ikens showed fibrous degeneration.

The following resolution was read by Dr. Keiper and unanimously adopted:

"To the General Public:—The Tippecanoe County Medical Society heartily endorses the Anti-Spitting

Campaign now being propagated by the Tippecanoe County Tuberculosis Association.

Spitting in and on the public highways is a nasty habit, and very dangerous to public health. If you must spit, spit in a paper napkin and then burn it, especially if you have tuberculosis, syphilis, diphtheria, or any other communicable disease.

We also urge the people to buy liberally the Christmas seals offered for sale."

Legislative matters were freely discussed, and it was unanimously voiced that with the beginning of the new year, the legislative committee must be named, and that everyone must do his part by being active early in the campaign, and keeping everlastingly at it.

Members present, twenty-nine. Visitors, one.

Adjourned. WM. M. RESER, Secretary.

ST. JOSEPH COUNTY

The thirty-sixth annual meeting of the St. Joseph County Medical Society was held Wednesday, November 16, at South Bend, in the Auditorium of the Elks' Club. The following program was carried out: "Evaluation of Symptoms in Diagnosis," Albert E. Sterne, Indianapolis; "Reflex Abdominal Disorders," Arthur E. Elliott, Chicago; "Operations on the Gasserian Ganglion, with Report of Cases," John F. Barnhill, Indianapolis; "Conservation of the Patient," Frederick G. Dyas, Chicago. Dinner was served at 6:30 p. m. at the Oliver Hotel, followed by an address on "The Physician and the Public," by Dean Stanley Coulter of Purdue University.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

BROMIPIN 10 PERCENT.—A bromine addition product of sesame oil, containing from 9.8 to 11.2 percent of bromine in organic combination. It acts like the inorganic bromides; but since it yields its bromine more slowly, it is thought to have less tendency to produce brominism. Bromipin 10% is said to be more lasting in its action than the bromides. The dose is 4 Cc. (1 fluidrachm), which may be increased in cases of epilepsy to from 8 to 30 Cc. (2 to 8 fluidrachms). Bromipin 10 percent is a yellow oily liquid, having an oleaginous taste. Merck & Co., New York.—(*Jour. A. M. A.*, Dec. 3, 1921, p. 1819).

AMYLZYME.—An extract containing all of the digestive enzymes of the fresh pancreas of the hog. It has the power to digest starch and protein and to split fats. It is claimed that it is of value in digestive disturbances resulting from a deficiency of pancreatic secretion. Amylzyme is sold only in the form of 2 grain capsules. G. W. Carnrick Co., New York. (*Jour. A. M. A.*, Dec. 10, 1921, p. 1891).

THEOBROMINE-P. W. R.—A brand of theobromine-N. N. R. For a discussion of the actions, uses and dosage of theobromine, see New and Nonofficial Remedies, 1921, p. 362. Powers-Weightman-Rosengarten Company, Philadelphia.—(*Jour. A. M. A.*, Dec. 10, 1921, p. 1891).

POTASSIUM MERCURIC IODIDE.—POTASII HYDRARGYRI IODIDUM.—A complex salt, K_2HgI_4, formed by the interaction of one molecule of mercuric iodide with two molecules of potassium iodide, containing about 25 percent of mercury. Potassium mercuric iodide is used for the same purposes as mercuric iodide, over which it has some advantages because of its solubility. As a germicide, it is effective since it does not coagulate albumin; however, there seems to be no work to show how much the activity is decreased when an excess of potassium iodide is present. As a germicide, potassium mercuric iodide is used in concentrations of from 1:100 to 1:10,000. Solutions of potassium mercuric iodide may be prepared: (1) by dissolving one part by weight of mercuric iodide and one part by weight of potassium iodide in a small amount of water and then diluting to proper strength; (2) by dissolving potassium mercuric iodide in water containing potassium iodide, equivalent to about 20 percent by weight of the potassium mercuric iodide used.—(*Jour. A. M. A.*, Dec. 17, 1921, p. 1971).

MERCURY AND POTASSIUM IODIDE-P. W. R.—A brand of potassium mercuric iodide-N. N. R. Powers-Weightman-Rosengarten Company, Philadelphia.—(*Jour. A. M. A.*, Dec. 17, 1921, p. 1971).

DIPHTHERIA TOXIN-ANTITOXIN MIXTURE-SQUIBB.—Each cubic centimeter of the mixture represents 3 L+ doses of diphtheria toxin and three units of diphtheria antitoxin. It is marketed in packages of three 1 cubic centimeter ampules representing one immunizing treatment; also in packages of thirty 1 cubic centimeter ampules. For a discussion of the actions and uses of diphtheria toxin-antitoxin mixture, see New and Nonofficial Remedies 1921, p. 282. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Dec. 17, 1921, p. 1971).

OIL OF CYPRESS-SCHIMMEL & CO.—A brand of cypress oil-N. N. R.—For a discussion of the action and uses of cypress oil, see New and Nonofficial Remedies, 1921, p. 95. Fritzsche Bros., New York.—(*Jour. A. M. A.*, Dec. 17, 1921, p. 1971).

XEROFORM-S. AND G.—A brand of bismuth tribromphenate-N. N. R.—For a discussion of the actions and uses of bismuth tribromphenate see New and Nonofficial Remedies, 1921, p. 71. Schering & Glatz, New York.—(*Jour. A. M. A.*, Dec. 17, 1921, p. 1971).

THEOBROMINE AND SODIUM ACETATE-P. W. R.—A brand of theobromine sodium acetate-N. N. R. For a discussion of the actions, uses and dosage of theobromine-sodium acetate, see New and Nonofficial Remedies, 1921, p. 363. Powers-Weightman-Rosengarten Company, Philadelphia.—(*Jour. A. M. A.*, Dec. 24, 1921, p. 2061).

EASTMAN BARIUM SULPHATE FOR ROENTGENOLOGY.—A brand of barium sulphate for Roentgen-Ray work-N. N. R. (see New and Nonofficial Remedies, 1921, p. 58). Eastman Kodak Company, Rochester, New York.

KALMERID GERMICIDAL TABLETS POTASSIUM MERCURIC IODID.—Each tablet contains mercuric iodid 0.29 gm., potassium iodid 0.58 gm., ammonium chlorid 0.12 gm., eosin "Y" 0.0005 gm., and yields, when dissolved in water, potassium mercuric iodid 0.5 gm., with an excess of potassium iodid. For a discussion of the actions and uses of potassium mercuric iodid, see New and Nonofficial Remedies 1921, p. 198. Davis & Geck, Inc., Brooklyn, N. Y.—(*Jour. A. M. A.*, Nov. 12, 1921, p. 1573).

IODIPIN 10 PER CENT.—An iodin addition product of sesame oil containing from 9.8 to 11.2 percent of iodin in organic combination. It acts in the system similarly to the inorganic iodids. It is not broken up in the stomach, but a portion of the iodin is split off when it enters the intestine; the remaining compound is readily absorbed, and, as in the case of other fats, is largely deposited in the tissues, where it is slowly split up. Because of this behaviour, the action of iodipin 10 percent is exerted more slowly than that of the inorganic iodids. The dose is from 4 to 16 cc. (1 to 4 fluid drams) three or four times a day. Iodipin is not marketed as such, but in the form of iodipin tablets 8 grains. Merck & Co., New York.—(*Jour. A. M. A.*, Nov. 19, 1921, p. 1655)

PROPAGANDA FOR REFORM

QUINIDIN IN HEART DISEASE.—Quinidin has suddenly leaped into prominence because of its striking effects in certain forms of cardiac irregularity. To see a heart that has been constantly irregular for one or two years because of a fibrillating auricle lose its lawless and rapid beat within a few hours under the influence of this drug and resume normal rhythm and rate and maintain these for months, must attract the attention of all. The conclusions of the few clinicians who have thus far reported their investigations are in remarkable agreement as to the fact that in about half of the cases of auricular fibrillation, Quinidin is capable of restoring to the sino-auricular node the control of the heart, so that, for a time at least, the working of the heart is normal. However, while those who report on the effects of Quinidin are fascinated by the possibilities of the application of this drug in medicine, they are wisely conservative in their statements and frankly admit that much is yet to be learned concerning its proper use. It is to be hoped that the few favorable reports will not lead to the indiscriminate use of the drug in every type of irregular and rapid type of heart.—(*Jour. A. M. A.*, Dec. 3, 1921, p. 1822).

OXYGEN THERAPY.—The difficulties of oxygen therapy do not lie in any danger from undue intake of oxygen, for no abnormal increase in vital processes occurs even when mixtures very rich in oxygen are inhaled. The problem is rather one of technic in securing an actual introduction of more oxygen into the lungs under mechanical conditions of tolerable comfort. The usual haphazard methods of oxygen administration are of slight avail. When oxygen was administered with effective breathing devices in cases of cardiac insufficiency, relief of cyanosis and slowing of the pulse were secured. In pneumonia, the results were sufficiently impressive to permit the conclusion that oxygen therapy assumes a rational role in the treatment of the disease.—(*Jour. A. M. A.*, Dec. 3, 1921, p. 1820).

DELANO'S RHEUMATIC CONQUEROR.—The state chemists of North Dakota analyzed this "rheumatic cure" some years ago and reported: "This preparation is essentially starch, with a small amount of talc, containing a little quinin coated with calcium carbonate."—(*Jour. A. M. A.*, Dec. 3, 1921, p. 1838).

BUTYN.—The Council on Pharmacy and Chemistry reports that Butyn is the name applied by The Abbott Laboratories to a new local anesthetic proposed for use in place of cocain in surface anesthesia in the eye and for anesthesia of other mucous membranes. Butyn is a chemical body, of definite, nonsecret composition, namely para-aminobenzoyl-gammadinormalbutylamino-propanol sulphate. Pharmacologic investigations indicate that Butyn may take the place of cocain for surface anesthesia of mucous membranes, and that it may be superior for this purpose, and especially for use in the eye, to other synthetic anesthetics, for the reason that it can be used in materially lower concentrations. So far, however, the therapeutic value of Butyn has not been proved by adequate clinical trials. For this reason, the Council postponed the acceptance of the drug for New and Nonofficial Remedies and published a preliminary report on Butyn for the information of those who wish to put Butyn to clinical trial.—(*Jour. A. M. A.*, Dec. 10, 1921, p. 1891).

INTRAVENOUS SPECIALTIES OF THE INTRAVENOUS PRODUCTS COMPANY OF AMERICA.—This firm's list of specialties bears a striking resemblance to those of other "intravenous specialty" firms. Its Endoarsen, like Venarsen of the Intravenous Products Company of Denver, is stated to contain a cacodylate ("dimethylarsenate") together with mercury and iodid. Venarsen was reported on unfavorably by the Council on Pharmacy Chemistry, in 1915. The inferior efficacy of sodium cacodylate and its worthlessness as a spirocheticide have been demonstrated. Like other "intravenous" firms, this company advertises the intravenous administration of drugs such as sodium iodid and hexamethylenamin. The objections to and the dangers of indiscriminate administration of drugs intravenously was recently emphasized in a report of the Council on Pharmacy and Chemistry on "Some of Loeser's Intravenous Solutions".—(*Jour. A. M. A.*, Dec. 10, 1921, p. 1912).

"THE ALSAKER WAY".—R. L. Alsaker advertises a series of "Books That Teach The Alsaker Way to Health and Efficiency". Rasmus Larrsen Alsaker was graduated by Bennett Medical College, Chicago, in 1910. Alsaker's book "Curing Diseases of Heart and Arteries" seems to be the book that is pushed at present. The first part of this book contains certain elementary facts of physiology and hygiene that could be found in the ordinary common school textbooks on such subjects. The therapeutic phases of the subject are so treated that the average reader might well reach the conclusion that all physicians, except Alsaker, are either fools or rogues, and that from Alsaker alone flows the only pure, unadulterated, 100 percent medical knowledge. Alsaker's book may be counted on to have a very definite effect on the person who accepts its teachings. It may lead any patient, who because of an impaired circulatory system is under the care of a physician, to abandon such rational means as the physician might recommend and attempt self-treatment.—(*Jour. A. M. A.*, Dec. 10, 1921, p. 1909).

COD LIVER OIL IN RICKETS.—While there is a growing belief that cod liver oil is of distinct therapeutic value in rickets, many of the experiments along this line are not sufficiently objective to be entirely convincing. Now, however, Park and Howland have furnished the direct ocular proof of the effects of cod liver oil on rickets which roentgenograms afford. The results in many cases have been so consistent that they feel justified in stating definitely that cod liver oil brings about a change in the bone which, if the diet is not too faulty, amounts to complete cure.—(*Jour. A. M. A.*, Dec. 31, 1921, p. 2122).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the curative claims advanced for them were held false: Salt-Sulphur Water (Salt-Sulphur Water Company), a water found to consist wholly or in part of a filthy and decomposed putrid animal or vegetable substance and claimed to be invaluable in the treatment of inflammatory and catarrhal conditions of the stomach, intestines and diseases of the liver. Pildoras Uriseptic (Davis & Lawrence Company and New York Medicine Company), pills consisting essentially of cubebs, methylene blue, salol and kava kava, and asserted to be antigonorrheal, diuretic, antiseptic and resolvent. Boquette's Family Remedy (Boquette Remedy Company), falsely claimed to be of value for chills and fever, rheumatism, lumbago, etc., consisting essentially of a solution of Epsom salt and saltpeter, and asserted to be of value in a large number of diseases. Volta Powder (Volta Company), essentially a mixture of free sulphur, impure iron (ferric) oxid, and a trace of essential oil, and sold

as a treatment for rheumatism, sciatica, gout, etc. Carey's Marsh Root (Carey Medical Corporation), consisting essentially of plant extractives, sodium potassium salts, salicylates, aromatic oils, glycerin, water and alcohol; asserted to be of value in Bright's disease, diabetes and all urinary troubles. Sterling Injection (Western Wholesale Drug Company), a watery solution containing opium, borax, and a trace of sulphate, and recommended for the treatment of gonorrhea.—(*Jour. A. M. A.*, Nov. 5, 1921, p. 1513).

ENDOCRINOLOGY AND PSEUDO-ENDOCRINOLOGY.—R. G. Hoskins, professor of physiology, Ohio State University College of Medicine, pleads for a greater degree of discrimination on the part of physicians in evaluating not only proper data but also the various agencies either seeking support in, or exploiting, this field. The latter aspect of the situation deserves special emphasis. Those who purpose acting as purveyors to the medical profession must accept the status of purveyors. The physicians or laboratory investigator of the medical sciences shall not exploit for commercial gain the result of his studies. At the present time a commercial campaign is being carried on by a "laboratory" purporting to specialize in endocrine products. The mail of physicians is flooded with a series of postcards, each card recommending and suggesting the use of the proprietary product of this self-styled laboratory for conditions ranging from eczema to epilepsy, and from obesity to tuberculosis. This free postcard advice is reenforced by reference to "monographs" and a trade journal in which scientific medicine is systematically belittled as unpractical. This advertising campaign is ostensibly under the supervision of the enterprising Mr. Hyde, the merchant of the firm. Mr. Hyde is a profound admirer of the eminent Dr. Jekyll, the medical director.—(*Jour. A. M. A.*, Nov. 5, 1921, p. 1499).

SCHICK TEST.—The entire absence of positive reactions to the Schick test in about one dozen children should lead to the suspicion that the particular lot of toxin used is inactive. It is not unlikely that toxin in small outfits may deteriorate after leaving the manufacturer.—(*Jour. A. M. A.*, Nov. 12, 1921, p. 1594).

ESTIVIN.—This is sold by Schieffelin & Co., New York. A request for a statement of the composition of this product sent to Schieffelin & Co., by the Council on Pharmacy and Chemistry, brought the indefinite and therefore meaningless statement that Estivin is an extract of Rosa Gallica containing no alcohol or foreign ingredients.—(*Jour. A. M. A.*, Nov. 12, p. 1595).

INTRAVENOUS COMPOUND (LOFFLER).—This is exploited by the Intravenous Chemical Company of Chicago. While physicians are asked to use this preparation and told of the profits to be derived from its use, they are not informed of its composition. From the analysis of this preparation in the A. M. A. Chemical Laboratory it was concluded to be a mixture of alkali chlorate and nitrate and boric acid probably produced by fusing together the constituents. Its composition is very similar to that of Oxychlorin and Zyme-old, which were analyzed by the laboratory nearly fourteen years ago. Intravenous Compound (Loffler) is a nostrum of secret composition which physicians are asked to inject into the veins of their patients. It must be purchased in connection with some supplementary material, "a complete set of apparatus" sold by the same concern. Its successful administration is said to depend on following a technic detailed either in a booklet sent out by C. L. Loffler or given by him in a "postgraduate course" which costs physicians fifty dollars unless they have purchased six dollars' worth of another nostrum, "Thymozene". The intravenous administration of drugs is impressive. To the patient the technic and its psychic effects is striking. The dangers of intravenous medication are matters of record, and yet physicians are asked to administer this preparation, the composition of which and the effects produced by it are unknown to him.—(*Jour. A. M. A.*, Nov. 12, 1921, p. 1591).

IODIN AND GOITER.—According to Marine, if the iodin store in the thyroid is maintained above 0.1 percent, no hyperplastic changes and, therefore, no goiter can develop. The studies of Marine and Kimball show that simple or endemic goiter can be prevented by the administration of from 3 to 5 mg. of iodin twice weekly, over a period of a month and repeated twice yearly. Is it not time for the medical profession to give special attention to this? If prevention of goiter is good preventive medicine, it is better preventive surgery.—(*Jour. A. M. A.*, Nov. 12, 1921, p. 1574).

MIDOL HEADACHE TABLETS.—Midol was analyzed in the A. M. A. Chemical Laboratory in 1912. At that time the chemists reported that Midol was sold in the form of tablets and to contain amidopyrin (first introduced as pyramidon) as their essential constituent. Amidopyrin is a pyrazolon derivative related to antipyrin, and it has no place in preparations for self drugging.—(*Jour. A. M. A.*, Nov. 19, 1921, p. 1674).

SELENI-BASCCA.—A campaign of free publicity is carried on for an alleged remedy for cancer. The press agent material has been of two kinds—for medical journals and for newspapers. That for medical journals has been sent out on the stationery of the Medical News Bureau, 77 Seventh Ave., Brooklyn, N. Y., D. E. Woolley, Manager. The items sent out to medical journals stated that the "Basic Cancer Research" had been organized to develop a treatment of cancer by the use of selenium and tellurium. The material received by newspapers was sent out by the "Cosmopolitan Cancer Research Society", 847 Union St., Brooklyn (the same address as the Basic Cancer Research). The secretary of the Cosmopolitan Cancer Research is D. E. Woolley. The name of the preparation which the Basic Chemical Corporation puts out is Seleni-Bascca. A specimen, labeled "SELENIBASCCA. A mixture of Colloidal Selenium in tablet form", was examined in the A. M. A. Chemical Laboratory. The tablets were found to contain only about 1.3 percent of selenium, and the product was not colloidal as claimed. The composition of Seleni-Bascca resembles that claimed for Sulpho-Selene, a preparation reported on by the Council on Pharmacy and Chemistry some years ago, but it contained no bile salts (a constituent claimed to be present in Sulpho-Selene).—(*Jour. A. M. A.*, Nov. 19, 1921, p. 1672).

SERUM FOR PERNICIOUS ANEMIA.—"Ph. Rahtjen, A. M., Ph. D.," Pasadena, Calif., informs laymen that he has immunized goats against the germ of pernicious anemia and that patients have responded favorably to the "serum". Reference to medical literature does not disclose just what Rahtjen's serum is, and a search of American medical literature for some years past fails to disclose any publication by Rahtjen on any subject. In 1917 the Rahtjen Tuberculosis Sanatorium, San Francisco, Calif., exploited the Rahtjen Cure for Tuberculosis with the claim that "the remedy seems to cure tuberculosis in all its forms with equal celerity and certainty"; and yet people are still dying of tuberculosis. In 1920, so the newspapers had it, Rahtjen was offering a "New-Life Fluid" which was a long step forward to counteract old age. This was in March, 1920, yet people continue to grow old. Acording to recent newspaper accounts, Rahtjen is making his extract from Mexican bulls and cows; the first for males and the second for females.—(*Jour. A. M. A.*, Nov. 26, 1921, p. 1753).

BOOK REVIEWS

NOSTRUMS AND QUACKERY. Articles on the nostrum evil, quackery and allied matters affecting the public health reprinted with or without modifications, from *The Journal of the American Medical Association*. Volume II, illustrated, 832 pages. Published by the American Medical Association, 535 N. Dearborn St., Chicago, Ill. Price, $2.00.

Ten years ago the American Medical Association published the first edition of the first volume of this book. A year later a second, and enlarged, edition of the first volume was issued. Since that time *The Journal of the American Medical Association* has published, week by week, articles on the nostrum evil, quackery and allied matters affecting the public health. All this material has been collected and appears in the present volume.

Quackery can never be defended; the "patent medicine" business, however, need not be fundamentally fraudulent. There is a place for home remedies for the self-treatment of simple ailments. Unfortunately, the home remedies of today are, generally speaking, those secret nostrums commonly called "patent medicines" and the methods of "patent medicine" promotion make these products a menace to the public health. The average "patent medicine" is so advertised as to frighten well people into the belief that they are sick for no other purpose than that of causing them to purchase the nostrums.

The present volume is a veritable encyclopedia of information on the subject it treats. The book contains nineteen chapters. The titles of some of these are: "Alcohol, Tobacco and Drug Habit Cures," "Consumption Cures," "Cosmetic Nostrums," "Deafness Cures," "Epilepsy Cures," "Female Weakness Cures," "Nostrums for Kidney Disease and Diabetes," "Medical Institutes," "Miscellaneous Nostrums," "Obesity Cures," "Quackery of the Drugless Type" and "Tonics, Bitters, Etc."

This partial list of chapters gives but a poor idea of the vast fund of information contained in the book. To make the volume still more valuable it contains an index of twenty-two pages, two columns to the page, which includes references to every article appearing in the first volume of "Nostrums and Quackery" as well as to all articles in the present volume.

The book is free from stilted or highly technical language. The articles have evidently been written with the idea that the facts they contain belong to the public. In the Preface, it is emphasized that the work which this volume represents is wholly educational in character—not punitive. "The matter that appears in this book has been prepared and written in no spirit of malice and with no object except that of laying before the public certain facts the knowledge of which is essential to a proper conception of community health."

HISTORY OF MEDICINE, WITH MEDICAL CHRONOLOGY, SUGGESTIONS FOR STUDY AND BIBLIOGRAPHIC DATA, by Fielding H. Garrison, M.D., Lt.-Colonel, Medical Corps, U. S. Army, Surgeon General's Office, Washington, D. C. Third edition, revised and enlarged. Octavo of 942 pages, with 257 portraits. W. B. Saunders Company, Philadelphia and London, 1921. Cloth, $9.00 net.

Every medical student or busy practitioner should be interested in the history of medicine. Much of what has been written by Dr. Garrison reads like a novel and holds the attention of the reader if he is interested in following the development of medicine and surgery from ancient times down to the present. As has been stated in the introductory chapter, the history of medicine is the history of human fallibility and error. The history of the advancement of medical science, however, is the history of the discovery of a number of important fundamental principles leading to new views of disease, to the invention of new instruments, procedures, and devices, and to the formulation of public hygienic laws, all converging to the great ideal of preventive or social medicine; and this was accomplished by the arduous labor of a few devoted workers in science. The development of science has never been continuous nor even progressive. Ideas of the greatest scientific moment have been throttled at birth or veered into a blind alley through some current theologic prepossessions, or deprived of their chance of fruition through human indifference, narrow-mindedness, or other accidental circumstances. It is no exaggeration to say that science owes most to the shining individualism of a few chosen spirits. Apart from this, "the success of a discovery depends upon the time of its appearance."

"The conquest of communicable diseases, the attainment of painless, shockless, deathless surgery, the manifold devices of sanitation, the recognition of an interrelation between health and disease and social-economic conditions, the wide-spread concern about industrial poisoning, trade diseases and accidents, the movement for wholesale destruction of noxious insects, parasites, reptiles, and vermin, the relation of the neuroses to crime and the sexual genesis of crime, the relation of the internal secretions to the neuroses and insanities, nay, even to cerebration itself, have been a few of the trends of recent medicine. The influence of disease itself upon the trend of human history in the past is still an unwritten chapter, thrown into striking accidental relief by the triumph of sanitation over infectious diseases in the European War."

In the preparation of this book the author has taken advantage of the Surgeon General's library, one of the most comprehensive in the world, though every effort has been put forth to obtain information from any source that would add to the material at hand. The whole book, aside from the appendices and index, has been divided into twelve chapters, and the enumeration of their titles gives a fair idea of the scope of the work: I. The Identity of All Forms of Ancient and Primitive Medicine. II. Egyptian Medicine. III. Sumerian and Oriental Medicine. IV. Greek Medicine. V. The Byzantine Period (476-732 A. D.). VI. The Mohammedan and Jewish Periods. VII. The Medieval Period (1096-1438), Cultural and Social Aspects of Medieval Medicine. VIII. The Period of the Renaissance, the Revival of Learning, and the Reformation (1453-1600). IX. The Seventeenth Century: The Age of Individual Scientific Endeavor. X. The Eighteenth Century: The Age of Theories and Systems. XI. The Nineteenth Century: The Beginnings of Organized Advancement of Science. XII. The Twentieth Century: The Beginnings of Organized Preventive Medicine.

EYE, EAR, NOSE AND THROAT. Volume III, 1921, of the Practical Medicine Series, under the editorship of Dr. Casey A. Wood on the Eye, Dr. Albert H. Andrews on the Ear, and Dr. George E. Shambaugh on the Nose and Throat. The Year Book Publishers, Chicago. Price of a volume, $1.75. Price of the series of eight volumes, $12.00.

As usual this is a very interesting volume and will be read with interest and profit by specialists. Some of the abstracts are a reflection of articles on military experiences together with references to histories

(Continued on page xxii)

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BALTIMORE

(Continued from page 38)

of cases arising from battle injuries or camp diseases. There are also references to lethargic encephalitis and focal infections as applied to the special branches of medicine under consideration. As in previous volumes, over half of the book is devoted to the eye, and but little of a real progressive nature, as reported in current literature, has been omitted. The part devoted to diseases of the ear offers abstracts of many articles concerning the diagnosis and treatment of diseases of the sound perception apparatus, and also the late advances in mastoid surgery as based upon extended experience through the influenza epidemic. In the part covering the nose and throat much is devoted to accessory sinus disease in addition to the usual subjects. While it has not been possible to abstract anything and everything that would appear in print concerning the diseases under discussion, yet the editors have succeeded well in furnishing abstracts of papers on practical rather than experimental subjects, and they have taken the cream of the articles that have appeared in current literature.

TUBERCULOSIS AND HOW TO COMBAT IT, by Francis M. Pottenger, M.D., A.M., LL.D., F.A.C.P. C. V. Mosby Co., St. Louis. Cloth, $2.00 net.

This is a book for the patient. It describes the nature of the disease with which the patient is suffering, pertinent facts concerning the source and manner of infection, the development of resistance or immunity, the course and care of the disease when once established, the things that interfere with cure, and the maintenance of health when once attained. In the main the book answers the questions that are most often asked by tuberculous patients, and it tells in an understandable way what must be done in order to combat the disease, and this includes many subjects, such as open air, rest, exercises, food, baths, climate, tuberculin treatment, sanitarium treatment, home treatment, etc.

PRACTICAL PSYCHOLOGY AND PSYCHIATRY, by C. B. Burr, M.D., Medical Director of Oak Grove Hospital, Flint, Michigan. Fifth edition, revised. F. A. Davis Company, Philadelphia. Cloth, $2.00 net.

This is a ready reference book for the nurse and practitioner, and discusses briefly psychology in the various forms of insanity, with causes, course and approved method of management. The author long has been known as an expert in mental and nervous diseases, and is competent to handle this subject in an authoritative manner.

THE ETIOLOGY OF EPIDEMIC ENCEPHALITIS

Certain resemblances of epidemic (lethargic) encephalitis to poliomyelitis have stimulated two similar investigations, which resulted in opposite conclusions. Amoss found that the serum of patients convalescing from encephalitis does not protect monkeys against the inoculation of poliomyelitis virus, whereas Neustaedter, Larkin and Banzhaf found that it does result in protection. We may assume, *a priori*, that the difference in results is due to the method; Neustaedter and his co-workers incubated the virus with the serum, while Amoss followed the technic he used previously with Flexner and Eberson. He administered the serum intraspinally and then injected large quantities of virus intravenously. The negative results of Amoss seem convincing, but the slight protection proved by the experiments of Neustaedter demands explanation. Several years ago it was found that the serum of patients suffering from herpes zoster was able to neutralize the poliomyelitis virus. It is therefore possible that the encephalitis virus is, like that of zoster, kindred, but not identical with the virus of poliomyelitis.—*Jour. A. M. A.*, Dec. 10, 1921.

OPTIC NEURITIS IN SERUM SICKNESS

In the case reported by V. R. Mason, Los Angeles (*Journal A. M. A.*, Jan. 14, 1922), certain abnormalities were discovered which pointed to involvement of the central nervous system in the reaction of the organism to a foreign serum. The patient was admitted to the hospital on the second day after the onset of acute lobar pneumonia. Type I pneumococci were grown from washed sputum. During the third, fourth, fifth and sixth days of the disease, the patient received 500 c.c. of Type I antipneumococcus serum intravenously. His temperature fell by crisis on the seventh day of the disease. Severe serum sickness appeared on the ninth day, and was present for fourteen days. During the course of the serum disease, a well marked, bilateral optic neuritis was observed. This was associated with marked lethargy and an increase of the globulin and cellular content of the cerebrospinal fluid. The optic neuritis was not associated with demonstrable visual disturbances. At the end of three months, the fundi had returned to normal in appearance.

METHODS OF PRECISION IN DIAGNOSIS OF DIABETES

In the cases cited by Henry J. John, Cleveland (*Journal A. M. A.*, Jan. 14, 1922), the condition was diagnosed as diabetes mellitus by the patient's physician on the basis that she had sugar in the urine. She was put on a rigidly restricted diet and kept on it until she had lost almost 50 percent of her weight; but she still showed sugar in the urine. Further examination revealed that she had a normal blood sugar content; and her ability to utilize carbohydrates —the glucose tolerance test—was demonstrated to be normal by a perfectly normal curve; that is, she was able to utilize all the carbohydrates one could give her. This was strikingly demonstrated later on, when a heavy carbohydrate diet, high in calories as well, failed at any time to bring her blood sugar above the normal level. These findings show clearly that the case was not one of diabetes, in spite of the fact that there was sugar in the urine, but a case of a kidney permeable to sugar, a fairly common condition.

Medical Lib.

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ORIGINAL ARTICLES

PRESENT DAY CLINICAL CARDIOLOGY*

By

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Two decades ago physicians were content to classify the disturbances of the pulse as regular or irregular. Great advances, however, have been made within the last decade and a half in the study of heart disease, and especially of the disorders of rate and rhythm. Sir James Mackenzie of Scotland, with his simple polygraph but a keen unequaled power of observation, gave the first impulse and inaugurated a new era in the study of heart disease, by his explanation of the mechanism of the persistently irregular pulse. Wilhelm Einthoven of Leyden, a Dutch physiologist, applied the string galvanometer to the study of the electrical phenomena of cardiac mechanism. This instrument, the electrocardiograph, in the hands of the inventor and Sir Thomas Lewis of London, has revolutionized our knowledge of the mechanism of the heart action. We are indebted to these pioneers of modern cardiology for the firm concrete present-day conception of heart disease. Their writings, with those of a few others in this country and abroad, have dispersed all the vague intangible ideas that more or less have mystified the practice of cardiology and instead have established a definite science founded on physiological, anatomical and etiological facts. What the present decade will produce no one can predict. Our research efforts are directed toward the corroboration or verification of some of the physiological points and the collection of clinical and pathological statistics.

In the diagnosis of heart disease, a careful clinical history usually points to important etiological factors as acute rheumatic fever, chorea, "growing pains," repeated attacks of tonsilitis, syphilis, or some other severe infectious disease, or exophthalmic goitre. A negative history, however, in a case with mitral stenosis does not discount the diagnosis of rheumatic heart disease. Likewise the denial of venereal disease does not influence one in the presence of a free aortic regurgitation with an aortitis or other stigmata of syphilis including a positive complement fixation test. Except for cases of cardiac neurosis and effort syndrome, a reliable history is the index of the functional condition. If there has been a cardiac break, that is, heart failure of the congestive type, there is a story of orthopnea, cyanosis, edema, pain under the right costal margin, from the stretched liver capsule as a result of engorgement, etc. The anginal type of heart failure is accompanied by graphic description of the typical radiating cardiac pain of angina pectoris. The limit of cardiac function is further defined by the history as to whether the patient is able to carry on his usual activities, or only slightly to moderately curtailed activity, or only greatly diminished activity, or no activity whatsoever without distress.

The physical examination, however, yields the *reliable signs* upon which we can safely base our conclusions that a patient has, or what is equally important, does not have heart disease. By our term heart disease, we mean actual or potential myocardial changes due to functional or organic damage to the heart muscle and congenital cardiac malformations, which will sooner or later produce symptoms.

In the general cardiovascular inspection, *distinct engorgement of the neck veins,* that is, overdistention signifying an abnormally increased venous pressure in veins raised above the level of the heart's base is evidence of heart disease. Increased abdominal and thoracic muscle tension, or intra-abdominal and intrathoracic pressure including mediastinal tumors must, of course, be ruled out before concluding that the sign is the result of cardiac embarrassment with engorgement of the right auricle.

Palpation may reveal *a definite thrill,* a distinct "purr" at the apex or over the base of the heart. A real thrill is the palpable counter-

* Given before the Fort Wayne Medical Society, December 20, 1921.

part of the rumbling apical diastolic murmur of mitral stenosis; a loud rasping basal systolic murmur of aortic stenosis, or congenital pulmonary stenosis, patent ductus arteriosis or interventricular septum defect; or more rarely the basal diastolic murmur of aortic insufficiency. This finding, a thrill, when unmistakable, is a dependable sign of heart disease. The vibration of the chest wall from an overactive heart is to be differentiated.

Cardiac enlargement is positive evidence of heart disease. Definite clinical or bedside signs are few and not infallable. The outermost part of the circumscribed apex impulse is the best guide to the size of the heart. In normal and moderately large hearts it corresponds to the left border, while in very large hearts it indicates enlargement but not the extent of the left border to the left. An apex impulse extending outside the midclavicular line or more than 11.5 c.m. to the left of the midsternal line in the 5th intercostal space, or better, in the 6th intercostal space, in the absence of causes for displacement gives a clinical indication of heart disease. Orthodiagrams or teleroentgenograms give exact measurements and consequently exact evidence of enlargement, when the latter is present, thus diagnosticating heart disease.

The rumbling *apical diastolic murmur,* the characteristic diagnostic finding in developed mitral stenosis denotes rheumatic heart disease, in which the myocardium is always directly affected. The presence of Aschoff bodies in the myocardium is proof of the involvement of the heart muscle in acute rheumatic fever.

The high pitched *basal diastolic murmur,* characteristic of frank aortic insufficiency designates usually rheumatic heart disease in a young individual and a syphilitic heart disease in the middle aged individual. Myocardial involvement is, as a rule, more widespread and more severe in syphilitic aortic insufficiency than in that of rheumatic origin. The root of the aorta is affected and the coronary arteries are involved especially at their origins.

Aneurism of the aorta is a manifestation of cardiovascular syphilis, which is not infrequently, especially in the south, a presenting complication which signifies accompanying heart disease.

Generalized arteriosclerosis produces nutritional disturbances enough in the myocardium to impair the structure as well as the function of the latter.

Chronic Nephritis likewise through toxins, blood changes, arterial changes, blood pressure changes, or what not, damages the heart muscle invariably and produces great cardiac enlargement as shown in a series of 60 cases which were studied clinically, electrocardiographically, and pathologically. The series shows ventricular weights of 250 G. and over, and myocarditis in every case in which the microscopic study of the kidneys showed chronic degenerative changes.

Persistent hypertension with the blood pressure reading constantly 25 to 30 m.m. of mercury higher than the accepted average normal level for the patient's age and sex, always results in cardiac enlargement and myocarditis. Our series showed ventricular weights of 250 G. and over in all cases with persistent blood pressures of 140 m.m. Hg. and over.

The presence of any one of the grave disturbances of cardiac rhythm as *alternation, heart block, auricular flutter,* or *auricular fibrillation* is sufficient bases for the diagnosis of heart disease.

Any one of the etiological factors, the signs, or the valve lesions would suffice as a topic for a lengthy discourse. We have selected the last mentioned group of reliable signs of heart disease for fuller discussion. The disturbances of the cardiac mechanism, though of the greatest importance, have been more or less unemphasized until clinical electrocardiography analyzed them and gave the basis for the simple rules and tests, which make possible the accurate bedside differential diagnosis.

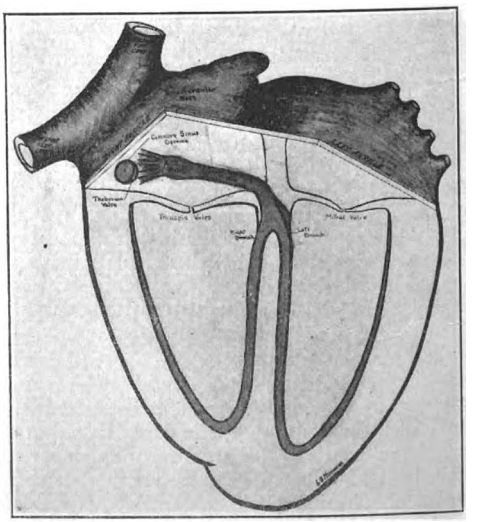


Figure 1. A diagrammatic representation of the special structures that control the origin and conduction of the impulses which regulate the cardiac mechanism.

At this point it seems logical to take up, in review, the special anatomy (Fig. 1) and physiology of the heart which does not receive very great emphasis even in our present day fundamental courses. The first structure of importance is the sino-auricular or Keith Flack Node, the so-called pace-maker of the

human heart which lies at the junction of the superior vena cava and the right auricle. The auriculoventricular or Tawara node, lies in the edge of the auricular septum tissue at the posterior and right border just anterior to the thebesian valve of the coronary sinus. The auriculo-ventricular or His bundle proper begins at this node and coursing almost horizontally forward and to the left, but keeping on the right side of the central fibrous body, to the anterior part of the membranous part of the interventricular septum, the bundle forks. The left branch perforates the membrane, enters the subendocardial space of the left ventricle immediately beneath the point of junction of the anterior and right posterior cusp of the aortic valve. It branches freely almost immediately and spreads out under the endocardium, as the freely anastomosing syncytial Purkinje network. The right division soon becomes subendocardial but passes downward in the moderator band or its representative proceeding directly to the base of anterior papillary muscle as a single strand, before breaking up into the subendocardial arborizations of the Purkinje tissue lining the right ventricle. The vagus nerves have fibers distributed to the sino-auricular and auriculo-ventricular nodes.

The physiology or mechanism of the normal heart beat is intimately associated with the special structures just described. The practical theory is that there is a constant building up (anabolism) of certain combined material having a distinct potential energy. This metabolic process occurs at a certain constant rate regularly and uniformly in every heart muscle cell. The accumulation of energy rises to a constant level where it "touches off" and falls promptly to zero. The level of discharge is always reached in the same time. This specialized neuromuscular tissue in the sino-auricular node, the pacemaker, holds control by virtue of its supreme lability or its faster rate of anabolism assuming that the process in the ordinary heart muscle is on a slower incline. The physico-chemical changes taking place in the sino-auricular node produce an electrical stimulus, a difference of potential, which can be detected by the string-galvanometer or electrocardiograph. This stimulus or impulse spreads with equal speed in all directions through the auricular muscle, "touching off" all the products of anabolism and liberating the energy of the auricular contraction. The impulse is then taken up by the auriculo-ventricular node transmitted through the His bundle and by its branches to the subendocardial arborizations of the Purkinje network of each ventricle. The time consumed by the stimulus in passing through the auriculo-ventricular node and His bundle normally never exceeds .17 to .18 seconds (the P. R. interval of the electrocardiogram) while the intraventricular spread takes place in .06 to .08 seconds (the QRS interval of the electrocardiogram). Thus the spread of the impulse or excitation wave is very rapid, the rate of transmission through the specialized tissues being 5,000 m.m. per second, while that through the ordinary heart muscle tissue is only 500 m.m. per second. The excitation of all parts is almost instantaneous, the energy is liberated and contraction results.

The disturbances of this mechanism under the influence of disease are what interests us chiefly. The pathological physiology gives us a clear conception of the clinical disorders of cardiac action.

The vagus nerves are distributed to the sinus node and have been proven to exert a strong inhibitory influence over the rate of stimulus formation. When the restraint is constant as in vagatonic individuals, athletes, or in basal brain tumor or meningitis, hypertension, pregnancy, jaundice, and in acute febrile convalescent cases, or following pilocarpin administration we find a slowing to a heart rate of 60 or even as low as 50, which we term *Simple Sinus Bradycardia.*

If the vagus tonus is periodic, as is often associated with respiration, we have a regularly repeated irregularity, the periodic waxing and waning of especially the youthful heart, also strikingly demonstrated by palpation of the dog's heart. This we term *Sinus Arhythmia.*

Release of the vagus inhibition by paralysis, as produced by atropin, increases the heart rate to between 150-160 at the most. Exercise, excitement, fright, nervousness, the effort syndrome, fevers and hyperthyroidism and sometimes unknown causes produce fairly persistent increases in the heart rate. This condition we term *Simple Sinus Tachycardia.*

Heart Block depends for its type upon where the affection strikes and to what extent the special structures are involved. *Sino-auricular block* is occasionally attributed to excessive vagus inhibition producing a completely dropped beat now and then. In this condition auricles as well as ventricles fail to contract, as the block is in the pacemaker. In the persistent S-A block, the next most irritable part of the specialized tissue, the auriculo-ventricular node or if this too is damaged, the junctional tissues assume the role of pacemaker and establish an auriculo-ventricular or junctional rhythm with or without retrograde stimulation of the auricle.

Auriculo-ventricular block results from pathological lesions in the A-V node or His bundle and may be of varying degrees. The first stage of A-V block is where there is only *delayed conduction in the His* bundle. The next lowest

grade is where one auricular impulse out of 8 to 20 fails to pass the His bundle and consequently fails to produce ventricular excitation, and a dropped beat is the result from this 20 to 19, or 8 to 7 *partial heart block*. We may get any degree of auriculo-ventricular block to such high degrees as 2 to 1, 4 to 1, even 6 to 1, mixtures or irregular blocking and finally *complete A-V block* with independent auricular and ventricular rhythms, with the regular idioventricular rhythm at a rate of 40 or less.

Besides blocks in the A-V or His bundle, we may have delayed conduction, incomplete or complete block in either the right or left branch of the His bundle, these we term *incomplete or complete bundle branch blocks*. Anatomically, the right branch proceeding as a single strand to the anterior papillary muscle on the right is more prone to injury than the left branch which breaks up just as it enters the subendocardial space of the left ventricle and consequently an extensive lesion is required to produce a block. Clinical experience agrees with these anatomical facts. In a series of 6,000 routine electrocardiograms we collected 32 cases of complete right bundle branch block and only one case of left bundle branch block. In the same series of 6,000 curves there were 32 incomplete right and four incomplete left bundle branch blocks. Occasionally the fibrosis which causes bundle branch block on one side spreads through the upper septum and involves the other side producing double bundle branch block or interventricular block with resulting complete heart block.

Arborization block due to wide spread lesions in the freely anastomosing Purkinje network cannot be considered established as a clinical entity.[12]

Extrasystoles, premature or ectopic beats, originate at some point other than the sinus node and break the regular rhythm by coming earlier than the regular beat. Some point in the auricular or ventricular muscle or in the junctional and most rarely in the lower part of the sino-auricular node becomes more irritable, due to some focal pathology or pathological physiology, than the tissues in the head of the sino-auricular node and consequently the anabolism rises even more rapidly or comes to its "touching off" level sooner and discharges an impulse, which getting into the specialized tissue spreads to all parts and the premature contraction results. After this phenomenon, there is a post-extrasystolic pause, which is required to build up the energy for the next regular beat. The premature touching off seems to have destroyed the immature potential energy more completely, hence the longer building time, the post-extrasystolic pause, necessary. According to the point of origin extrasystoles may be auricular, junctional, or ventricular. Interpolated extrasystoles are thrown in in mid-diastole and do not disturb the rhythm at all, that is, there is no long post-extrasystolic pause.

Alternation or Pulsus alternans is a condition characterized by alternate stronger and weaker regularly occurring and evenly spaced beats. It is supposed to be due to the contraction of different numbers of ventricular muscle scrolls at alternate systoles. The sign is evidence of cardiac fatigue and in the slow regularly beating heart is of grave prognostic significance, while in a paroxysmal tachycardia it is negligible.

Paroxysmal tachycardia is an attack of sudden onset and sudden offset coming on more or less frequently. The heart rate rises suddenly from the normal to rates between 100 and 220 per minute. The paroxysms are made of longer or shorter runs of extrasystoles occurring regularly. In other words, an ectopic focus dominates the rhythm. The new focus may be in the auricular muscle outside the sinus node, in the junctional tissues, or in either ventricle. The latter two types are quite rare, the junctional type in two cases seen seemed to be more of a permanent tachycardia. The ventricular type is of very grave significance as it is, so far as known, always associated with coronary occlusion as pointed out in our series of four cases[11].

Auricular flutter has been recently shown by Lewis[5] to be due to stimulation of the auricle by a single and continuous wave, circulating usually around the mouths of the superior and inferior venae cavae. A circular continuous contraction wave at a rate of 220 to 350 per minute, usually 260 to 329 instead of the normal wave proceeding from the sinus node and extending out into the auricular tissue and dying out. The auricular action is rapid and weak. The His bundle does not conduct an impulse to the ventricle, with each action of the auricle, there is characteristically a 2:1 block, the ventricle contracting only half as often as the auricle. The block may be of higher grade or may vary from time to time, producing an irregular ventricular action.

Auricular fibrillation likewise has recently been shown by Lewis[5] to be related in mechanism to auricular flutter, but different in that instead of the single circus wave, there are circulating sinous waves propagated and revolving perpetually, following varying paths colliding and apparently following the re-entrant paths of least resistance. As a result, the auricle does not contract, however, 450 to 600 impulses are generated per minute and the auricular action consists of fibrillary twitchings with consequent dilatation from engorgement. The His bundle is showered with a great number of irregularly placed haphazard impulses, of

varying intensity, the greater of these are conducted to the ventricle. The ventricular action following this type of stimulation is likewise absolutely irregular. Some stimuli come so close to preceding stimuli and are so weak that although they produce ventricular contractions the latter are so weak that the aortic pressure is not overcome, the semilunar valves are not opened and no pulse wave is sent forth. This accounts for a higher heart rate than the pulse rate, the difference is what we term the pulse deficit.

Now having briefly described all the disturbances of the cardiac mechanism, the important ones of which we mentioned as the diagnostic signs of heart disease, we may proceed to the clinical differentiation of these disorders.

We can divide the abnormal rhythms into those that are always and usually regular and those that are always and usually irregular. Sinus bradycardia, sinus tachycardia, bundle branch block and complete heart block are regular. Paroxysmal tachycardia, auricular flutter, and partial heart block are, as a rule, regular but very short paroxysms of tachycardia and irregular or varying blockings in auricular flutter and partial heart block may in occasional instances produce an irregular pulse.

Alternation or pulsus alternans is a regular irregularity presenting no real disturbance in rhythm but merely a difference in force of every other regular beat. Sinus arhythmia is a periodic irregularity, the waxing and waning rhythm so often associated with deep breathing in the normal youthful heart. Extrasystoles usually disturb the rhythm considerably, occasionally the regular spacing of extrasystoles in bigeminy, trigeminy, etc., gives a sense of regularity to the disturbance. Frequent irregularly placed extrasystoles, especially those of auricular origin, may produce a disturbance simulating very closely auricular fibrillation. Auricular fibrillation is an absolute irregularity in force of beats as well as in rhythm.

DIFFERENTIAL DIAGNOSIS

General observations together with a few simple tests are sufficient for practical clinical differential diagnosis of the disturbances of cardiac mechanism. Following the observation of the rhythm and routine counting of the heart rate and pulse rate, the careful observation of the rate for constancy is employed in every case with a tachycardia. In this test, the apex rate is counted for a full minute at five and ten minute intervals and in different positions with and without vagus stimulation. The paroxysmal auricular tachycardia or any other tachycardia with an abnormal point of origin shows remarkable constancy of rate with variations of not more than two, from minute to minute under various conditions. The tachycardias of sinus origin show distinct, though often only slight, variations in rate from minute to minute and under varying conditions.

The vagus stimulation tests further differentiate the cardiac disturbances with rapid rates. Pressure on the eyeballs or on the vagus in the carotid sheath in the neck or the Valsalva or Mueller breathing experiments can be used.

Auricular flutter reacts most constantly and characteristically to this test. In this disturbance, the His bundle is very susceptible to vagus influences, which increase its resistance, that is, decrease its conductivity, thus producing auriculo-ventricular block. The two to one block, which is always present, is increased by vagus stimulation and the ventricles may be held in check for thirty or more auricular beats, but the effect is only temporary, lasting for only short periods of 5 or 6 short runs of auricular activity with rare ventricular responses.

Paroxysmal auricular tachycardia may be completely stopped in about fifty per cent of cases, that is, the pulse will drop suddenly from its high level around 240 to the normal rate of about 80 and remain so. If this total effect is not obtained, there is no effect whatsoever, which is characteristic in the other fifty per cent of cases.

Simple sinus tachycardia shows usually only a slight slowing effect. This slowing of the heart slightly or moderately produces the characteristic discrepancy in the minute rates.

The last and most important simple test is that of *increasing the heart rate*, by exercise, amyl nitrite or atropin. The benign and moderately grave irregularities, as sinus arhythmia, extrasystoles, and partial heart block, when of low grade and of irregular or mixed type, and even auricular flutter when irregular due to comparatively rare irregular blocking, all become regular when the heart rate reaches 120 to 140 at the most. An irregularity, which persists or becomes more irregular at 130 to 140, is auricular fibrillation.

Alternation, the regular alternate variation in the strength of the heart beat is accentuated, when greater work is demanded of the heart in the increased rate. The sphygmanometer test with the pressure just below the systolic level will allow to pass only the alternate beats that produce the high systolic pressure, consequently the pulse rate at the wrist is just half of what it is after the pressure is dropped 20 to 30 m.m. of mercury or dropped to zero.

Bigeminy, due to alternate extrasystoles, may show differences in the blood pressure levels, but the normal beats and extrasystoles are not evenly spaced. There is a coupling effect due to the post extrasystolic pause. The bigeminy disappears with exercise, while the alternation is accentuated.

Extrasystoles and partial heart block both disappear at the higher rates. Gradual disappearance of the irregularity with the gradually increasing rate suggests extrasystoles while a sudden doubling or an increase of the rate by a regular factor suggests heart block. The main point, however, in the diagnosis is the presence of a premature heart sound followed by a post extrasystolic pause in the case of extrasystoles, as the rate drops back to normal. In heart block, under the same circumstances, no sound is heard at the apex and the pause is longer, amounting to almost two cardiac cycle lengths.

If the heart rate is 40 or less, heart block is present and if it remains so, unaffected by exercise, amyl nitrite, or atropin, complete permanent auriculo-ventricular block with an idioventricular rhythm is present. If of a high grade partial or temporary complete heart block type, the exercise or drugs may cause a sudden rise to twice, thrice, or four times the rate. Sinus bradycardia is only gradually overcome and the rise in rate is not very great. Furthermore, the rate practically never drops below 50 per minute and is always regular. The presence of any etiological factor, as jaundice, meningitis, brain tumor, or other evidences of vagatonia help to make the diagnosis of sinus bradycardia as much as fever hyperthyroidism, etc., help in differentiating sinus tachycardia.

DISCUSSION

Thus the observations of rate, the vagus tests, and the exercise or drug tests suffice to make bedside diagnoses of the nature of the cardiac disorders. Such being the case, the question of the necessity of instruments of precision, such as the string galvanometer or electrocardiograph of Einthoven will arise. Certain accomplishments and advantages, however, must be recognized. The string galvanometer has made possible the complete analysis of the cardiac mechanism and given us a clear conception of the physiology and pathological physiology of the heart beat. Electrocardiographic tracings make the differential diagnosis absolutely final in all cases.

In certain cases, electrocardiograms are the only means of making a reliable diagnosis. These cases are few, but of importance. In the group of heart blocks the diagnosis sino-auricular block can be established only by electrocardiograms which show the absence of auricular activity as well as the failure of ventricular activity. In the lowest grade of auriculo-ventricular block, that in which there is merely a delayed conduction, we have as the only clinical suggestive evidence a split first sound, a presystolic gallop rhythm, due to the fact that the sound of auricular systole is so far separated from that of ventricular systole, that the two are not blended as is usually the case. The split first sound is by no means pathognomonic. Electrocardiograms show this distinctly as a P-R interval greater than .17 to .18 seconds. The exact grade of heart block is also best established by electrocardiographic curves.

Bundle branch blocks can be diagnosed only by electrocardiograms, which show characteristic broadening of the QRS interval or delay in the intraventricular conduction and diphasic T waves. There may be a suggestion of this disturbance in the presence of split heart sounds, especially a splitting of the second sound, a protodiastolic gallop rhythm, due to slight asynchronism of the ventricles and consequently asynchronous closure of the semilunar aortic and pulmonary valves. The reduplicated second sound, however, may be present in the absence of bundle branch block.

The point of origin of paroxysmal tachycardia can be definitely established only by electrocardiograms, though suggested by the clinical facts mentioned. When of short or only moderate duration infrequent or frequent and only slightly incapacitating it is usually of auricular origin; when persistent, it is of junctional origin; and when associated with severe persistent angina, shock, and pulmonary edema, it is probably of ventricular origin due to coronary thrombosis.

TREATMENT

The pharmacologic action of drugs on the cardiac mechanism is being analyzed by electrocardiographic means. Lewis[6] has explained the action of Quinidin, the newest and most spectacular of the drugs used in cardiology. He has shown that Quinidin increases the refractory period of the auricular muscle and thus makes auricular fibrillation impossible. The action of the Quinidin in clinical cases of auricular fibrillation can be best controlled and carefully watched as it passes through impure flutter to normal mechanism. Likewise digitalization may be controlled by observing the changes in the T waves, and by the accurate recording of the ventricular rate.

The treatment in heart disease is a lengthy chapter and cannot be lightly passed over. At the same time, we can merely touch upon a few points in a general discussion of this type.

The differentiation of the disturbances of cardiac mechanism is absolutely essential in the scientific treatment of heart disease. Digitalis cannot be indiscriminately given in one and all types of heart disease. Recent careful studies by McCullough[8] based on electrocardiographic as well as clinical and pathological observations show that digitalis is contraindicated in diphtheritic heart disease with its widespread acute

myocarditis and conduction disturbances. Likewise in partial heart block, especially in the sclerotic high tension case, digitalis by its action on the vagus and His bundle, increasing the block, may precipitate Adams-Stokes attacks. The patient might die in one of the attacks, or on the other hand, the slow rate of a damaged heart may embarass the circulation to the point of heart failure because of an inadequate minute volume output. A clear conception of the disturbed mechanism as well as the pharmacologic action of drugs allows one to use digitalis for its diuretic effect and whatever effect it may have on the heart muscle, even in the presence of heart block. In this connection, the use of atropin in 1/50 grain doses once per day, and in any emergency makes safe the administration of digitalis to the point of getting beneficial effects.

The importance of the differential diagnosis of the disordered heart actions that may appear during a surgical operation or postoperatively, and are diagnosed acute cardiac dilatation, is obvious. The patient's life is often at stake or the maintainance of adequate blood supply in a part is essential to the success of the operation. If the paroxysm is one of auricular tachycardia, as it most frequently is, vagus pressure in 50% of cases will yield a spectacular cessation of the disturbance. If the paroxysm is of auricular fibrillation or flutter, rapid digitalization is effective or Quinidin may produce striking results with the establishment of normal mechanism.

Sinus bradycardia, sinus tachycardia, and extrasystoles require no specific therapy. The treatment of any presenting cause is indicated. An ice bag to the precordium is of service in any simple sinus tachycardia.

Auricular flutter and auricular fibrillation yield the most brilliant therapeutic results. Our ideas of these disturbances have been greatly changed within the past few years due to the work of Lewis and others[5]. The idea that the disorder once established, is ever afterward permanent has been modified by two notable exceptions, namely, the discovery of paroxysmal and transient cases, and the re-establishment of normal mechanism by Quinidin therapy in cases of apparently permanent auricular fibrillation.

The action of this powerful new drug Quinidin is explained by Lewis[6] on the basis of the existence of a circus movement in the auricular muscle about the great vessels, a single circulating wave propagated and revolving perpetually upon a re-entrant path sending out impulses at the rate of 450 to 600 per minute. The mechanism is possible only if (1) a circular path of sufficient length is available, (2) if the refractory period is sufficiently short, and (3) if the speed of the wave is sufficiently slow. Quinidin prolongs the refractory period and delays the recovery of the tissue, thus rendering the gap between the crest and the wake of the circulating wave shorter and eventually abolishing it altogether and normal mechanism, the sinus node, again resumes control. However, Quinidin slows conduction through the auricular muscle and this prolongs the gap and favors circus rhythm. This latter unfavorable effect acts exactly oppositely to the former or favorable effect, and when the unfavorable effect predominates fibrillation does not stop, but the auricle always slows from 400 to 600 down to 200 to 300, while the favorable effect stops the fibrillation. The rise in ventricular rate, which is quite frequently experienced, and often causes alarm, is due to the slowing of the auricular rate, which is conducive to less blocking. The paralyzing effect of Quinidin on the vagi is also conducive to an increase in the rate of the ventricle, although this is moderated in some degree by a direct depressing effect on the junctional tissues.

Following the methods of Frey[3] who has done the most work on this subject, we have used a preliminary test dose of 2 grains (.1G) to guard against idiosyncrasy to the drug. With no evidence of hypersusceptibility the drug was administered in 3 grain doses, gradually increasing to 7.5 grain (.4G) doses three times daily, the period of treatment totaling six to eight days. Occasionally larger doses were used and occasionally the drug was used over a longer period. Our results correspond to those of the many other observers in that in 20 out of 30 cases we were able to re-establish the normal mechanism. Our post-operative auricular fibrillation cases responded most uniformly and especially well when the etiology was toxic goitre or arterio-sclerotic heart disease. Recent cases responded most readily and most permanently. Cases of long standing were more refractive to treatment and more treacherous because of the danger of auricular thrombus formation during the long period of stasis. If there are any signs of cardiac failure, the patients should be thoroughly digitalized and, after suspension of the digitalis for ten days, Quinidin may be effective.

In cases in which auricular fibrillation has been established for some time, and where there are mechanical factors, as mitral stenosis, which tend to precipitate fibrillation, the disorder is often refractive to Quinidin. Even when Quinidin therapy is successful the reestablished normal mechanism is often of only short duration. Quinidin cannot be given continuously because it produces myocardial weakness. In spite of

the fact that normal mechanism is the most conservative, it is a question whether Quinidin is advisable in these cases in preference to digitalis.

Quinidin therapy is still in the experimental stage and not yet ready for widespread uncontrolled and indiscriminate use, for its administration is not entirely free from dangers. In recent especially post-operative hyperthyroid case the danger is least. Eventually it may be one of our most reliable and safe drugs. The intravenous use is not justifiable in the light of accompanying dangers. Cases presenting electrocardiographic evidence of defective conduction do poorly and sometimes terminate fatally quite suddenly. The danger of embolism from fragments of intra-auricular thrombi that have formed during the stasis and break on the re-establishment of normal auricular contractions, has been pointed out by Mackenzie and Orr[7], Benjamin and V. Kapff, Ellis and Clark Kennedy[7].

The striking and reliable effects of digitalization in auricular fibrillation and flutter are established facts. The type of digitalis preparation used, the method of administration, the dosage, and the criteria which determine the further management of these cases, warrant some discussion.

It is preferable to have a standardized digitalis preparation assayed by the Cat Method[4]. The Cat Unit being the weight of dry drug in milligrams, which is required to kill one kilogram of cat when the solution is slowly and continuously injected intravenously. High grade specimens of digitalis when not assayed by the Cat Method may be regarded as having an average activity of 100 mg. to the Cat Unit, but not more than 75% of the calculated total amount should be given in the first three doses. Likewise when the patient's weight is not obtainable, due to his poor general condition or generalized edema, estimations of the true body weight are to be made as accurately as possible and not more than 75% of the calculated total amount should be given in the first three doses.

The average total amount to be administered by mouth to man is 0.15 Cat Unit per pound of body weight. The calculation of the average total amount of the drug is then made according to the formula for the type of drug used[2].

$$\text{Grams of powdered leaf in total amount} = \frac{\text{Cat Unit} \times 0.15 \times \text{Weight in Pounds}}{1000}$$

$$\text{Cubic centimeters of tincture in total amount} = \frac{\text{Cat Unit} \times 0.15 \times \text{Weight in Pounds}}{100}$$

$$\text{Cubic Centimeters of infusion in total amount} = \frac{\text{Cat Unit} \times \text{Weight in Pounds}}{100}$$

With a standardized preparation, the average total amount for a man of 150 pounds is 2.25 grams (34 grains) of the powdered leaf, 22.5 c.c. (4.5 + fl. drams) of the tincture or 150 c.c. (5. ounces) of the infusion.

Pardee[9] gives a simpler method for estimating the amount of the tincture, which is the most widely used and most generally satisfactory preparation. He advises calculating on the use of 2 minims of standardized tincture per pound of body weight. For the man of 150 pounds this would allow 300 minims or 20 c.c. (4 fl. drams) of the tincture.

The method of administration of the total calculated amount is the next important point. Robinson[10] reported the use of the drug in a single massive dose with demonstrable clinical results, as early as three hours after the administration and always within 18 to 24 hours. For experimental purposes the single massive dose is advisable, but it is not entirely free from dangers. Eggleston's[2] methods are safer and very effective. When the patient has received no digitalis within the preceding ten days, in urgent cases 1/3 to ½ of the total calculated amount is given in the first dose. After six hours 1/5 to ¼ of the total amount, after the second six hours ⅛ to 1/6 of the total amount and every six hours thereafter 1/10 the calculated total amount until maximum digitalization. In non-urgent cases ¼ of the calculated total amount at each of the first two doses six hours apart and thereafter 1/10 to ⅛ of the calculated total every six hours until effect. If the patient has received digitalis within ten days and there are no evidences of effect, the total amount should be reduced to 75% of the total calculated amount. If there are evidences of partial digitalization it is safest to use not more than 50% of the total calculated.

The signs of digitalization are similar to those of slight digitalis poisoning. In auricular fibrillation, the auricular activity is not affected but through its action on the vagus the His bundle conduction is greatly reduced, so that only the stronger impulses at less frequent intervals are conducted. The ventricular activity is slower, more regular and more effective, so that with each ventricular contraction the aortic valve is opened and the pulse comes through to the peripheral arteries. The pulse deficit disappears, that is, the apex rate and the radial rate becomes similar, which is one of the results sought in digitalization. The drug is continued further until the apex rate is about 75, at which rate it should be maintained continuously. Nausea and vomiting after digitalization has

been under way for some days; a fall of the heart rate to 60 per minute or lower; and the appearance of frequent extrasystoles or a coupling due to bigeminy are signs of adequate digitalization and indicate a temporary discontinuation of the drug.

Digitalis therapy must be kept up in all cases of fibrillation. After digitalization, a patient will lose the digitalis equivalent of 20 minims, 30 to 40 drops, of the standard tincture per day. Consequently, to keep a patient digitalized with a heart rate at 75, he must receive this amount of drug daily. The effects of the calculated total amount are dissipated within a week to ten days, and therefore the small doses must be begun soon after digitalization. Thirty drops each morning or ten drops of the tincture t.i.d. are continued. After a week or so, the patient may again experience nausea, the drug is again temporarily withheld, and the dosage dropped to twenty drops of the tincture per day. The heart rate at the apex must be frequently counted as an index of effective therapy, which should keep it at about 75 per minute.

Along with the specific therapy, the general measures are most important, as Dock and others have long maintained. Rest in bed in Fowler's position, with morphine in full doses to promote sleep and complete relaxation are necessary adjuncts in the treatment of heart disease. A limitation of the fluid intake to 1000 c.c. (5 glasses) is of value especially in edematous cases, together with a low protein salt poor diet; all of these requirements are met by the Karell diet of 800 cc. (4 glasses) of milk only per day. An increase in the fluid output also aids considerable in cases of heart failure with edema. This can be done by the Hay concentrated salts method in which 5 to 15 grams (½ to 1 ounce) of Glauber's or Epsom salts, in not more than a half glass of water, are administered three times daily for five to seven days. Diuresis by theocin .2 to .5 gm. (2 to 7 grains) for three doses at three hour intervals in edematous cardiac cases that have had digitalis has been proven to be effective by Christian[1].

Massage, passive movements, resistant movements, and graduated exercises are rational methods of preparing a convalescent cardiac case for getting up and about and eventually back to work.

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EPIDEMIC ENCEPHALITIS*

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MARION

The individual symptoms of epidemic encephalitis are not new. They are classic in our knowledge of medicine. However, the symptom-complex and other clinical phenomena do not adapt themselves to the ordinary phases and progress of similar disorders, and this, together with the suspected epidemiology, permits us to speak of epidemic encephalitis as a new disease.

The characteristic features of the symptom-complex in a typical case arise out of the cranial nerve area of distribution. These nerves have their origin in the basal ganglia, midbrain, pons and medulla. The pathology as it appears in these parts is not new in its elementary characteristics. The only distinguishing feature of the pathology is that its intensity in the typical case is circumscribed in the parts of the brain mentioned.

What we know of this disease is not a textbook matter. Many of you have in mind, from your medical journals and from your contact with the disease, the data here presented. However, it is a matter of value that we at times review and discuss the things we have in mind and therefore I present this paper without apology.

My information comes from personal experience, case reports, and the current medical literature on the subject extending back over a period of about four years.

The following sources of information have been used: The Journal of The American Medical Association, Archives of Internal Medicine, The American Journal of The Medical Sciences, Journal of Laboratory and Clinical Medicine, Journal of Experimental Medicine, Medical Science—Abstracts and Reviews

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HISTORY: Inasmuch as we have allowed ourselves to speak of this as a new disease, let us go back into the history of medicine and see if diseases of a similar type have been described. There is evidence that, almost in the antiquity of medicine, Hippocrates described a type of disease simulating epidemic encephalitis. In Northern France five hundred years ago there was the "Picardy Sweat" characterized by great prostration.

In 1485 a type of illness appeared in London which, in three months, spread over all England. This epidemic followed closely upon the invasion of England by soldiers from the North of France. Five other English epidemics occurred down to 1551. Some of these were especially sevère, showing a mortality of fifty per cent. in some communities. People in all stages of life were stricken. It was not until this last epidemic that we have anything like a fair description of the disease. It is mentioned as of sudden onset, a sense of apprehension, shivers, chills, vertigo, pains in the neck, head and shoulders, prostration, sweats, fever, sleep; and fatal in two or three hours or a day. If the patient survived the first day it was assumed that he had fair chance of recovery.

In 1529 an outbreak occurred in Hamburg following the arrival at that port of the crew of an English ship. From Hamburg the disease spread over Central Europe, following the lines of travel.

In 1889-1890, following an epidemic of influenza in Northern Italy, Hungary and Central Europe there was present a disease of the encephalitis type.

In 1917-1918 epidemic encephalitis was reported from England, Central Europe, Australia, North and South America and Africa. Did the extensive troop movements of the World War have anything to do with this fairly world wide distribution?

Since the World War, epidemic encephalitis has been recognized generally. The first satisfactory recognition and description was by Economo of Austria in 1917; and it was he who put into medical literature the name lethargic encephalitis, but this name is now being superceded by the better one—epidemic encephalitis.

ETIOLOGY: An encephalitis may occur in the course of many infectious diseases, but this type of encephalitis is a secondary condition attending or following some other well defined clinical disease. Epidemic encephalitis is a disease entity. The clinical phenomena and symptom-complex are not secondary to any other well defined or predominating antecedent infectious process. It is true that the infection must find entrance to the body, and this likely occurs through the mucous membrane of the upper air passages, but this antecedent condition is insignificant as compared with later developments.

The evidence at hand indicates that the disease is not due to any of the well known infective agents or their toxins, and no etiological bacterium has yet been isolated. Some very valuable work has been done and it may be that the problem is well toward being solved, but as yet the results are not conclusive. Emulsion of brain tissue from fatal cases has been injected into rabbits, intracerebrally, producing characteristic symptoms and pathology. From rabbits the disease has been transmitted to guinea pigs and monkeys. The filtrate from brain emulsion will produce the disease if injected (in the rabbit) into the eye, sciatic nerve sheath, or when applied to an abraded nasal mucous membrane. The disease is not produced if these injections are made subcutaneously, intravenously, or intraperitoneally, or if inoculation is attempted by way of the trachea or stomach. Characteristic symptoms have followed inoculation with emulsion of naso-pharyngeal mucous membrane, and also by inoculation with the filtrate from such emulsion.

The disease is no doubt transmissable, but in what manner is not as yet well understood. By some observers it is believed that the virus is persistent and may be distributed by convalescents, or that attendants may become carriers without themselves showing symptoms, and that masked or abortive forms may be an equal or greater menace. The most likely primary focal area is the nasal mucous membrane, and the secretions from these parts are therefore the most likely sources of transmission early and late.

Data on epidemiology indicate a prevalence of the disease in the late fall, winter, and spring months. It is unusual for a second case to occur in the same family.

PATHOLOGY: The pathology is fairly distinctive and characteristic. However, the individuality of the disease from a pathological standpoint is not determined entirely by the character of the pathology but also by the circumscription of its intensity. This intensity occurs in that part of the brain embracing the optic thalami in the fore-brain and the cranial nerve nuclei in the mid-brain, pons and medulla. Not all the pathology is confined to this area. In all cases it is wide spread to a greater or less degree, and sometimes seriously invades the meninges cortex or cord.

Macroscopically the appearance is one of vascular congestion with hemorrhages into the white matter. These hemorrhages are petechial and sometimes larger. There is edema, and the brain tissue is more soft and doughy than normal.

Microscopically the small hemorrhages are brought out more clearly. There is cellular infiltration of the vessel walls into the perivascular spaces and into the white matter; proliferative changes, endothelial and interstitial, and degenerative changes in the nerve cells and nerve sheath.

The infiltrating cells are in the vessel walls, massed about the vessels in the perivascular spaces, and more sparsely scattered through the white matter. In some cases these cells have a tendency to group themselves about the gray nuclear areas, but these areas are not usually invaded.

The spinal fluid is clear and shows usually a normal pressure, a normal or only slightly increased cell count, negative luetic and negative culture tests. The pressure and cell count will vary in different stages—being higher in the earlier stages when the acute infectious process is most active.

The blood shows a moderate leucocytosis and negative Wassermann.

Culture tests in nerve tissue and in various other tissues show negative results.

The intraocular findings are usually insignificant.

The gray matter of the nerve nuclei being usually not invaded, then why the deluge of profound symptoms that we sometimes see that are referable to disturbed cranial nerve function? It has been suggested that the symptoms arise from or are accentuated by the mechanical conditions that are caused by the pathology in the brain stem. The lession in the white matter gives rise to pressure due to perivascular extravasation, edema and sometimes hemorrhage; and the nerve nuclei are easily affected by these combined pressure factors on account of their intimate admixture with the white matter in the brain stem.

The brain stem is not only the location of the various ganglionic nerve nuclei mentioned but through it pass all the conducting paths that come from the whole body in the spinal cord. Therefore the pressure factor of the pathology may have some influence on the manifestations in distant parts of the body.

CLINICAL PHENOMENA: Function derangement may be anything from a mild disturbance to a complete loss; different cases may vary widely in predominant symptoms; and the individual case will nearly always present distinctly new features as it developes.

Aside from the cranial nerve symptoms there may be hallucinations or delirium, suggesting a lesion of the meninges or cortex; or certain types of pain pointing to involvement of the posterior gray matter of the cord; or certain types of paralysis pointing to involvement of the anterior gray matter of the cord.

From a bedside study we will find that a majority of the cases have a prodromal period of a week or two characterized by asthenia, and in the latter part of this stage by diplopia, ptosis, and drowsiness. Other early symptoms may be headache and vomiting, which are likely toxic as may occur in any infectious disease. The diplopia will likely disappear in a week, but the ptosis continues; the drowsiness deepens into lethargy, and to these symptoms may be added a few or many of the symptoms that may arise out of the pathology described. This period may last from two to six weeks. The convalescent period may last over many weeks or months, and during this period the patient should have the most intelligent care and management.

It is difficult to evaluate the symptoms by any method of classification or enumeration, but to get a comprehensive view let us enumerate them as: (a) General symptoms: asthenia, drowsiness, lethargy (sometimes insomnia), stupor, coma, sweats, headache, vomiting, shivers, chills, fever, pains in the head, neck, arms and sometimes in the lower extremities. (b) Mental symptoms: restlessness, apprehension, hallucinations, delirium. (c) Motor symptoms: photophobia, diplopia, squint, nystagmus, ptosis, facial paralysis, mastication paralysis, tongue, throat and laryngeal paralysis, heart and respiratory disturbances, coarse tremors, choreic movements, spasticities, clonus, convulsions, ataxia, fecal and urine retention. (d) Sensory symptoms: various pains in the head, neck, arms and legs.

In the enumeration of these symptoms an effort has been made to cover fairly well the whole field of symptoms as they may appear in a series of cases taken collectively. Of all these, those appearing most uniformly are lethargy, diplopia, and ptosis—perhaps in seventy-five per cent. of the cases. The other twenty-five per cent. will tax our diagnostic skill. The predominant symptoms in these may strongly suggest other diseases, meningitis, brain tumor, poliomyelitis, etc., but if proper appreciation of minor symptoms is taken in such cases, and they are studied in relation to pathology we will arrive at a working diagnosis.

To make a more concrete picture of epidemic encephalitis I cannot do better than give the history of a case now under my care since January this year. This case is as typical and

presents as wide range of symptoms as any we are likely to see.

Mr. S., age 34, foreman in Stationary Manufacturing Co. History negative, venereal infection denied, blood Wassermann negative.

Jan. 22d, 1921, came to my office. General attitude and appearance of fatigue, slightly drooped eyelids and expressionless countenance. Had been seeing double for a day or two, eyesight slightly blurred. Five days previously he had slight nausea one day, not persistent. For a week he had been unusually fatigued, lying down immediately on reaching home. There was no pain of any kind, and was not during his whole illness. He took to his bed Jan. 23d and did not leave it for two months. He took no solid food for seven weeks after the third day in bed. During this time he could not masticate, and swallowed liquids very slowly and with great difficulty. For six weeks of this period he could not articulate any sound and most of the time made no sound whatever. From the latter part of January it was ten weeks before he could change the position of his body or turn himself in bed. He seemed to have no voluntary power in muscle action on account of spasticity. Twelve weeks from the time of taking his bed he was able to walk, showing some spasticity but no static or locomotor ataxia.

Before he took his bed an ordinary dose of magnesium sulphate gave good results, but from that time the bowels would not respond to any ordinary cathartic, but did respond to enemata. By the time he was able to walk the evacuations were without help and have been so since. This was the only symptom referrable to the gastro-intestinal tract. The bladder acted normally.

His general symptoms in order of incidence were: nausea, weakness, drowsiness, lethargy, shivers (at night during the second week—of sufficient intensity to shake the bed), temperature around 100 during the second week, some sweats but not profuse or persistent. The mental symptoms were only a mild delirium during the second and third week. His motor symptoms ran the whole gamut of the cranial nerves and into the long tracts of the arms and legs. These motor symptoms began very early and continued into convalescence.

His symptom-complex embraced asthenia, drowsiness, lethargy, diplopia, ptosis, a general opthalmoplegia with the flattened out blank expressionless face, inability to talk, inability to swallow anything but liquids, increased respiratory and heart rate, coarse tremors, spasticities, retention of feces.

There was not a full paralysis of any function. The spasticities were a uniform and persistent feature. If an effort was made by the attendant to open the mouth it was resisted by the masseter. If force was applied to change the position of an arm or leg there was a marked clonic resistance. The legs were in a constant slightly flexed position with the foot in partial extension. The arms were kept in a repose position across the chest in a fairly rigid state, the wrist and fingers slightly flexed. If the arm was lifted by assistance away from the chest it retained the flexed elbow and wrist and would remain away from the body unsupported until replaced by the attendant. Any voluntary motion that might be attempted by the patient was attended by a marked aggravation of the coarse tremor. The reflexes were all sharp during a period of four months. The diplopia disappeared within a week. During the next five weeks the grossly manifest cranial nerve symptoms disappeared and with them the lethargy. The spasticities disappeared in another five weeks. In four and a half months after the beginning of the illness light work was begun; but at this time, nine months, he is not able to carry the full load and there is no evidence to indicate when he will. The general body functions are good. There is now no objective evidence of the disease except a slight tic in the muscles of the left cheek.

DIAGNOSIS: This case presented no difficulties. It presented the cardinal symptoms: asthenia, diplopia, ptosis, lethargy. With these symptoms alone a diagnosis is justified—even with the mildest ptosis. One case coming under my care had no demonstrable diplopia but had the weakness, lethargy and a very mild ptosis without any other symptoms and was afebrile. He could easily be aroused but immediately went off into his lethargy and continued so for one month day and night.

The diagnosis must rest on some evidence of involvement of some part of that area of the brain which embraces the cranial nerve nuclei. This evidence may not be the predominating part of the clinical picture. Meningial, cortical or cord symptoms may be confusing. A case seen in consultation was at the time apparently one of general toxemia. There had been a temperature of 103 which had fallen to 100. He did not seem especially sick. Was dressed, lying on a cot. He had at times a mild delirium, more pronounced at night, and had trouble in sleeping. When approached in conversation he was rational. The diagnosis was determined by a later development of typical lethargy.

Another case seen in consultation could be termed acute paralysis agitans. It was in a man of such age as would be liable to this disease. The symptom-complex was typical of paralysis agitans but had developed rapidly and had a very early fatal ending, as one would consider mortality from paralysis agitans. I could not

keep from my mind the probability of the symptoms being a corallary to the main proposition of epidemic encephalitis.

In differential study there would come to mind, botulism, syphilis, poliomyelitis, brain tumor, cerebro-spinal meningitis, tubercular meningitis, uremia, alcoholism, hysteria, and conditions secondary to the ordinary infectious diseases.

The general diagnosis will call for a study of the following: (a) A usually short prodromal period in which may appear an upper air passage infection—also such symptoms as may appear with ordinary infectious conditions. (b) A characteristic phase in which may appear the classic symptom-complex, or a modified symptom grouping, or a decidedly confusing grouping of clinical phenomena that will challenge our best skill in differentiation. (c) Laboratory findings: blood count, spinal fluid tests, Wassermann and culture tests.

PROGNOSIS: By observers having to do with a number of cases the mortality is reported from nothing to forty per cent. The average is likely twenty. If the patient survives the early toxic stage he has a good chance for recovery. The two factors in mortality are the early toxemia and the affection of the vital centers in the medulla. Concerning the after non-fatal effects we will know more as time goes on and more convalescents are studied and reported upon.

This disease is an infectious process which may lead to a greater or less degree of fibrosis, both endothelial and interstitial, and to degenerative processes in nerve tissue. For this reason may we not expect to deal later with certain sclerotic processes, or some types of dementia or some types of chorea? The disease may produce an endocrine imbalance. Will this adjust itself?

I have seen but two cases showing after effects: The one reported, showing objectively only a slight tic spasm of the left cheek. This man tells me he is much deficient in endurance and cannot get the same interest and initiative in his work that he did before his illness. His mental processes are clear. Another case: A man, 36, never seriously ill, attack epidemic encephalitis Dec., 1919. First three days hallucination of a man in a lake trying to climb on floating log and never succeeding, no sleep these days, afterward lethargic five weeks, worked every day as shipping clerk in a paper house, at times while working walked into objects and against the wall on account of lethargy. He has been able to sleep but very little at night and none during the day since the lethargy left him. He goes to bed and after a half hour of restlessness lies awake the rest of the night in a fairly quiet condition with no special brain activity and without pain or distress. He came to me in March, 1921, presenting a general "let down" appearance. He complained of general fatigue and had some aching distress in the back of his head. His mentality was clear, the reflexes normal. He had been taking iodides, veronal, and trional. With 15 grains of the hypnotic he could sleep. The iodides were discontinued, the hypnotic reduced and finally omitted. At the present time, twenty-one months since the beginning of his illness, he is sleeping three or four hours a night. He has no pain or distress of any kind. His attitude is one of lessened interest in his environment. His mental processes are clear. His endurance is much deficient—not able to work.

TREATMENT: The treatment resolves itself largely into a question of management. In some cases in the earlier stages the nervous system is in a condition of stress and excitement—in most cases the condition is the opposite. In either type there must be an environment conducive to the minimum of shock to an already damaged nerve structure. The lethargy is not necessarily evidence that the nervous system does not receive impressions but rather that it does not voluntarily respond. Therefore in lethargic cases further damage may come from an irritative environment.

It is very necessary that there be a sensible understanding of the condition by the friends, a proper type of nurse, a subdued light and plenty of fresh air in the sick room, a nutritious and easily digested diet, plenty of fluids by the stomach, warm baths, proper bowel elimination and a limited drug therapy.

Several remedies have been used—hexamethaline perhaps more than any other, watching the kidney effect. Hexamethaline does find its way into the body fluids.

Serologic work has nothing definite to offer. However, it is shown experimentally that the injection of encephalitis virus into the eye of a rabbit, or the application of the virus to an abraded nasal mucous membrane will produce the disease; but will not do so if the rabbit had previously been given a subcutaneous injection of virulent brain emulsion. The serum of rabbits immunized by subcutaneous injection gives no protection to other rabbits against injections of virus into the brain. Neither does the serum of recovered monkeys or of recovered human beings have any protective action in rabbits. The serum of monkeys recovered from poliomyelitis does not protect against encephalitis, nor does the serum of encephalitis protect against poliomyelitis.

A matter of paramount importance is that the family and friends (and the patient as far as possible or advisable) shall have a proper

understanding of the disease and the course it is likely to pursue through a period of many weeks or months. In this way only can that proper cooperation be secured which is so essential in carrying out the plan of management.

DISCUSSION

DR. CLAY BALL (Muncie): I wish to mention the so-called mild or abortive cases, in which there is no localizing disturbance, when you find no cranial nerve pathology to help you in the diagnosis and the constitutional symptoms are your lone symptoms. You have early a slight febrile reaction, with a little lethargy, which is profound and lasting. This lethargy is too profound to be attributed to any toxic condition of which we are aware. The patient does not seem to be sick, he is ambulatory, and the lethargy is out of all proportion to the constitutional symptoms. That is one thing which has impressed us with the thought that we have met something new. These ambulatory cases, from the standpoint of public health, are frequently the worst cases, for they are the hardest to isolate. You ask if it is necessary to isolate them. Certainly very little has been said about this, and we know that the contagious element is very small, but basing our idea on what we know of other infectious and contagious diseases it seems that we should isolate these patients. If we do not isolate we do nothing. Flexner has called our attention to this and many states require that they be reported.

There is another class, the severe type of the fulminating type, which attacks the patient very abruptly. I saw one patient with one of the leading neurologists of the state, and he died within a few hours. Another case, after four or five days in convulsions, finally got well. This man had two spinal drainages and on regaining consciousness proceeded on his way to health. I cannot say that the spinal drainage had anything to do with his recovery, but it is at least a coincidence. Other men have noted this fact.

DR. GEORGE F. BEASLEY (Lafayette): We had an epidemic of this disease in my town in 1872, and called it "spotted fever." The head would draw back and there was a curve to the back. I started in with bromid of potassium and it did no good. I remembered I was taught that in inflammation of the serous membranes you should give opium until you produce an effect, so I started in with a little, about one-twelfth grain, and the only relief the little patient could get would be for his big brother to sit alongside of him and keep a pressure with his hand on his head. The only thing he could keep on his stomach was crude opium. Morphine had no effect. I finally ran it up to one grain, then to two grains, and told the parents to give it every hour until he was easy. Then I said, "The old lady will probably give him too much and he will die, but at least he will die easy." When I came the next morning I did not see any bed hanging on the fence, as they always did in those days when anybody died, and when I went into the house the patient looked up and said, "Good morning, Doctor." I asked how many powders they had given him, and the mother said that they gave him two teaspoonfuls at midnight. A week or two afterwards I read an article by Jacobi in which he said to give opium until you get an effect and then I felt better. Since then I have given such patients opium, kept the bowels open by enemas and by salines, but have never put an ice pack on the head.

DR. CHARLES F. NEU (Indianapolis): It is a source of gratification to find this subject brought before this section. The condition is serious from a number of standpoints. First, because of the insidious onset in so many of the cases. Second, because of the difficulty in diagnosis. Third, because of the inability to carry out any definite line of treatment. Fourth, because of the serious after-effects. While it is true that a great many cases in their onset are acute and definite, in that you have definite loss of function of certain activities of the nervous system, such as cranial nerve paralysis, as has already been referred to, there are other cases in which the symptoms are not so definite. It may be said that there is not a symptom manifested in this disease that does not occur in other diseases of the nervous system—that there is nothing pathognomonic. There are certain things that make the diagnosis suggestive, but taking the symptoms individually there is nothing pathognomonic, and the difficulty in the treatment is in not knowing the cause. The filterable virus has been isolated and inoculated with reinfection, but no definite isolation of the bacterium or animal organisms, such as we are able to isolate in tuberculosis, etc., has been accomplished. The diagnosis has to be made by elimination. You have to eliminate other causes and fall back on epidemic variety unless you have the definite symptom-complex to start out with. The particular group of symptoms that is manifested depends upon the particular part of the nervous system that is predominantly involved. In many cases there are mental symptoms which are predominant—sleeplessness, delirium, hallucinations, and even definite psychoses, such as mania and paranoid conditions, may be the predominating signs.

DR. CHARLES D. HUMES (Indianapolis): I wish to say that the great number of cases I see do not come to my attention until after the toxic

effects have worn off. I have seen them after eight or ten months still manifesting the choreiform movements, partial paralysis and mental disturbance. I think rather than try to make many classifications of encephalitis we should classify them under one head. I wish to repeat what has been said that any symptoms which occur in any organic neurological case can appear in epidemic encephalitis. No examination is complete without a most minute study of the fundi, the visual fields, and the serology. I have in mind a case which I studied with Drs. Neu, Whitaker and Eberwein, where the man had stupor, ptosis, partial rigidity of the pupils, mental defect, and asthenia. *The fundi were quite normal but he had a complete* left sided hemianopsia and the postmortem revealed a mixed cell sarcoma of right brain. I mention this because in our efforts to diagnose from a few symptoms we should explore the whole neurological field.

DR. L. D. CARTER (Indianapolis): There is one point I would like to emphasize and that is the value of spinal puncture in the acute stage of the disease. In the treatment arsenic is the only drug that seems to give any benefit, but in my cases I think the ones in which we have used complete and frequently repeated drainage of the subdural space have probably gotten along better. The spinal fluid findings are not characteristic. There is occasionally an increase in the cells and in globulin. The amount is not much increased. On puncture it first comes with a spurt and then settles down to a steady flow, showing that there is not an actual increase in the fluid, but a swelling of the brain and cord, with pressure on the subdural space. I have cases who have suffered from this disease two or three years ago and who still show disturbances, either motor, sensory or mental. The prognosis is difficult. I think complete recoveries are rare. There is almost always some residue for months or years after the attack.

DR. ALBERT E. STERNE (Indianapolis): I do not believe that there is such a thing as a primary nervous disease. To my way of thinking the nervous system is practically always secondarily affected. As long ago as 1835 or '40, Semerling called attention to the fact that the pathology of "poliomyelitis acuta" lay in the vascular system primarily. Many years after this, von Leyden called attention to the fact that certain clinical syndromes were found, which formed clinical and pathologic related entities. Von Leyden showed that true bulbar palsy, subacute bulbar palsy, chronic poliomyelitis, commonly called "progressive muscular atrophy" and the form associated with amyotrophic lateral sclerosis were one and the same thing; but different segments of the nervous system are involved, and therefore there are certain differences in the clinical manifestations of disease, but they are essentially the same thing.

Let me emphasize that you cannot ever rely on any single symptom. Probably all of us have been impressed by the fact that there is a distinct resemblance in cases of epidemic encephalitis all the way through, to certain well known medical pictures, which we have seen for many years in the more isolated forms and in epidemics such as we saw, the older ones of us, after the influenza epidemics of 1890 and '91. Especially in the one of 1890 the nervous system was extremely involved. The association of nervous symptoms along with certain manifest infections, a certain selective action on the neuraxes which is taken by certain unknown invading agents, such as we see in poliomyelitis cases, is not at all uncommon. This selective action is clearly demonstrable in epidemic encephalitis, but the disease must first of all be considered a general constitutional infection. The central nervous system is secondarily involved by way of the vascular system, the usual mode of invasion, not only in epidemic encephalitis, but in epidemic poliomyelitis, epidemic meningitis and other similar affections.

Undoubtedly many cases have been erroneously classed as epidemic encephalitis; on the other hand many mild or undeveloped forms have been overlooked.

I regard the prognosis as very grave as to complete recovery. A tardy, tedious recuperation must be looked for, even in the most favorable cases.

DR. W. A. FANKBONER (Marion) (closing): I have not much to add, but I appreciate the reception given the paper, and the very intelligent discussion. I think one great satisfaction to an essayist is what he can contribute to general medical welfare. I do not mean necessarily anything new, but if what he says can stimulate a discussion and out of that discussion there comes a reiteration and emphasis of what we already know, or some new suggestions, that is of value.

One of the things that I think needs emphasis is what Dr. Sterne has mentioned, and that is that this is not a local disease. There is no disease of any type whatever that is entirely local in its pathology, in its symptomatology, or in its after effects. So with this disease, the infection must find entrance to the body through some local area, and in some inscrutable way which we do not understand the brain stem later suffers most in typical cases; and, as Dr. Neu has emphasized, the brain pathology is not all of it by any means. The pathology is widespread and in some instances it is not the brain stem but some other part of the nervous system that is most severely attacked.

To me the great interest that comes from a modest effort of this kind is the great value that the study of current medical literature gives us and the great value of the collateral information that goes with the study of any pathological process and the clinical phenomena arising out of it. It is not that one has written a paper and presented it, but that through such an effort some benefit has come to our honorable medical profession.

SOME PROFESSIONAL SHORTCOMINGS*

WILLIAM A. HOLLIS
HARTFORD CITY

I wish to thank you for the honor of having made me your Chairman for the year just closing. I realize it is my duty and a privilege, as such, to fulfill that obligation as best I may and to bring to your minds topics that are not new to you, but which to me seem worthy of consideration. There are problems, other than those of scientific interest, that confront us as medical men.

I shall not attempt to solve them alone, but will cooperate with you, now and always, for the betterment of our profession and its honorable recognition by minds that are yet in the grasp of pathies and cults.

CHIROPRACTIC

Like Knighthood, which was once "in flower," chiropractic is now "in full bloom." All other cults have gotten their vertebrae out of "alignment" and their nerves "impinged," for the time being at least.

Who would have thought, a few years ago, that such a hoard of uneducated craftsmen, with only a few weeks of training, could develop into such automatic puppets, working so harmoniously and in unison with the brains of their promoters? There should be a lesson in this to us. As soon as the petals of this flower have fallen, other varieties will be budding.

If people will fall for, and become enthusiastic over, a fantasy, how would scientific truths appeal to them if presented properly? If the success of such an organization depends upon a few shrewd, well paid propagandists and advertising managers, why cannot we adopt a similar method of influencing the minds of the masses?

We have learned the lesson, in this State, at least, that legislation does not control. We can do very little, working alone, to influence public opinion. Our disgust for the cult sometimes brings us into conflict with the mind of a faithful disciple, and we get no further in the end than a tirade upon this individual for being such an intellectual nonentity. Nothing is accomplished by such antagonism.

"The public press is a moulder of public opinion, and if the regular medical profession had taken advantage of the public press in making the public acquainted with the accomplishments of scientific medicine, the public would not today be suffering from the effects of so much quackery and charlatanism."—(*Jour. Ind. Med. Assn.*, Sept., 1921.)

The propaganda and reform department of the A. M. A. should reach further than enlightening doctors about things they already should know. It is the people who should be reached.

We of the medical profession are largely to blame for the situation, and we are the ones who will have to take the initiative in eradicating these pests. How many of you would enjoy practicing your profession in a state where the chiropractors and osteopaths are legally qualified, through their own separate Boards? It is almost unthinkable, but such is the case in Oklahoma just recently. Shades of Æsculapius! our brethren out there must be in a happy frame of mind.

CONSULTATION

Consultations with our medical friends, as a personal favor and for unselfish scientific interest and helpfulness, is one of the splendid ways of strengthening fraternal bonds and learning from each other. We should consider it a high compliment of friendship and confidence to be asked by a colleague to assist in the examination of his patient, that some phase of the situation may be cleared up. You certainly are keeping a friend, and the greatest good is being done for the sufferer. We should never place a financial value upon such consultations. Our medical friends should feel free to consult by phone, on the street, by letter, or call at the office with his patient, without embarrassment or apology. I hold in the highest regard you men to whom I have appealed from time to time for advice and counsel, and which was so freely given. I have in my files a mass of correspondence which has been extremely helpful. As we learn from others, so should we also learn from ourselves. This may be done by taking a serious interest in our work and keeping a check-up on it. Carefully written case records should have been begun long ago and should ever be continued. Do not trust to memory or become satisfied with an easy going routine. Besides the helpfulness to yourself, a most favorable impression is created upon the minds of patients that a genuine interest is being taken in their cases. Nothing is more humiliating than to have to ask a patient what his trouble was or "What we did for you when you were here before." We

*Chairman's Address before Section on Ophthalmology and Otolaryngology at Indianapolis session, September, 1921.

either push ahead or slip backward. There is no professional nor intellectual level. Go back over your old case records occasionally and see how much you have forgotten, how your work has improved, or perchance fallen short. In this way we learn from ourselves.

REFRACTION

There is, sad to say, a lot of eye men who are doing the poorest sort of refraction. For this situation there is no excuse. If they do not know how, they should learn. Take the time, care and interest and charge for it. I know personally a few men, members of our society, who have been influenced so insidiously by the commercial methods of some opticians, that almost without intent and at first reluctantly, they have partly given up the only dependable method of refraction that has stood the test of time in the hands of masters in our profession. It is positively absurd to think of abandoning homatropine, hyoscine and atropine, when indicated, regardless of the age of the patient, because of the whims, caprices and prejudices of the misguided. We may as well compromise scientific medicine with chiropractic. Take advantage of the tirade against it by the pseudo doctor-optician, who is quite often a chiropractor on the side, to do better work and gratify your ideals and convictions with a better and more intelligent class of patients. I have done this and I hope you here today are doing the same.

While there will always be more refraction to be done than there are oculists to do it, and well-trained, conscientious refracting opticians—as well as ignorant pretenders—will be in demand by the masses, the facts remain that ametropia and its results must be recognized and given serious consideration. A vision 20/15 does not necessarily mean that there is a perfect physiological working. Many most serious diseases may be present.

Let us visit and learn from each other occasionally. Call on your professional friends at home and away—see their work and compare your own with theirs. They will be glad to tell you all they know.

By way of digression, permit me to mention a little, but very important, thing I picked up from a friend whom I see before me. I noticed that he used a perforated disc, with an opening about the size of the average pupillary diameter, before the eyes that had been prepared for refraction by cycloplegic. The purpose so apparent, the thing so simple; so essential to clear, sharp central vision. All confusing peripheral rays shut off, as in an eye where the accommodative and pupillary reflexes have not been abolished. From then on, I have done no refraction without it and I get better results. Try it both ways and convince yourself, to your own satisfaction. This is one example of practical, accidental helpfulness.

SYPHILIS

We should ever keep before our minds, as do the internists and general practitioners, the frequency of syphilitic infections and their complications. Do not work alone in the management of these cases. In the treatment of syphilis, we have learned a lot when we realize that our friends who sent us these cases know more about its management and treatment than we do, as a rule. We know more about its effect upon special sense organs than they, and it is for that aid alone we are solicited. I do not want to be misunderstood as saying that we wash our hands of responsibility by so doing. Lazy, incompetent and conscienceless practitioners are to be found in most all communities, but there are always good men, to whom we owe a debt of cooperation and confidence. Without having needed our assistance, the case would not have been referred to us, and when our work is done the patient should still be in the hands of the one to whom the case rightfully belongs, if he is prepared and willing to continue treatment. In other words, the medical men will have a greater respect for us if we do not administer our own salvarsans, if we can avoid it. Group practice, in this modified form, is practical in every community. We should not and cannot work alone. What applies to the management of syphilis also applies to other conditions which call for aid and cooperation of internists.

TURBINECTOMIES

You here today are not in the class of turbinate barbarians and cannibals. We still have them with us, though; the legalized, mercenary, conscienceless near-quacks, whom we have not been able to reach. They hide themselves and we see only the "works of the devil." How helpless we are and how we pity the poor, innocent victim, the possessor of a wide open nose, dry, scabby or perhaps a fetid ozena, when we behold a nasal septum as crooked as the coast of the New England States and the turbinates destroyed on the false assumption that an air channel must be secured no matter what means employed.

If you cannot do a good submucous resection, for Heaven's sake leave it alone or have someone do it who can.

TONSILLECTOMIES

The tonsil, like the appendix, has been the object of jest, ridicule and scepticism, to a greater or less degree, by both laymen and some physicians. Sometimes it is remarked by a patient that "My doctor does not believe in tonsils"—as though it were a religion or a creed. He may not believe in "worms" either, but that

does not alter facts. I think after all that this influence results in good, for it acts as a check upon our enthusiasm, causing us to stop, look and listen. However, more tonsillectomies are being done than formerly, and will continue to be. But, like the wholesale and reckless sacrifice of teeth, their indiscriminate removal has given cause for a protest of conservatism that is having a favorable influence. We will have to say that, if there is any doubt as to whether or not a tonsil is feeding organisms and toxins into the blood stream, or harboring organisms of a dangerous kind, their removal can do no possible harm, if properly done. To my mind this brings up an important consideration.

How many of you have a definite and reliable technic for any and all kinds of tonsils in this operation? If you have none, it is time you were developing one. At every meeting of the State Society and other gatherings we see a great array of new-fangled instruments for tonsillectomies, or mostly some modification of a freakish device. When we meet our friends at times, as we do here today, among the first question asked is, "What method of tonsillectomy do you use?" Your reply should be, "A strictly surgical enucleation," rather than naming some man in St. Louis, Cincinnati, Kansas City, New York or elsewhere. The whole outfit should be dumped into the rubbish heap as non-essential, fantastic and unsurgical contraptions. There would then be less temptation for the untrained.

We who pose as skillful men in our chosen field, do not always do an ideal enucleation, with a minimum of traumatism and resulting scar tissue, but we should be more dependable than one who does them only occasionally. When we seldom, or almost never, leave a mass adherent to a patch of capsule, or mutilate the pharyngeal pillars, we will have a greater respect from some of the general men who have discovered that they can do cleaner work than some of us. I am sure none of us have any right to complain of any one in general practice doing his own tonsillectomies if he does them well, for he may have discovered that his results are more satisfactory than the surgical colleague in his community.

None of us are 100% perfect. Some of you have seen a fragment of tonsil left by me; I have seen the incomplete work of some of you. Let us be charitable. When such is discovered, do not make it an occasion to create prejudice against the work of one of your friends who, on the whole, may have greater and more dependable skill than his critic.

Don't sit around and worry about the men in other fields who are intruding our sacred domains, without first inspecting yourself. The fault may be your own. Cut out your general practice and all surgical side-lines, play the game fair and they will support you, almost to the man, everything else being equal. Neither you nor they can succeed well, professionally or financially, with too many irons in the fire. The same may be said of some general surgeons, who do a little of everything because they need the money, as they frankly admit. In the end they do not get it, and I have never seen one of them get far. To maintain their dignity, to keep the confidence and respect of doctors and laymen, is inconsistent in such practice. If you are an Opthalmo-Oto-Rhinologist, be one; if a General Surgeon, be one.

MEDICAL MISFITS

There are two classes of medical men who are not helpful and are hard to assimilate. They will not cooperate and are an absolute hindrance to progressive medicine. These are the medical broker and the medical croaker. The first is one who is out for gain at any cost, regardless of hardships and inconveniences to fellow-beings. He takes much but gives little. He cares nothing for public opinion in matters of equity and community welfare, or professional advancement; cares nothing for what you think of his methods. He is aggressive, domineering, hypocritical, pretentious and strutty; a friend to your face, a traitor to your back. Meet him in consultation, he is the chief actor, working well up-stage. When you depart, he will remain or return and take advantage of your absence. Meet him alone and he is suspicious. Crowd him into a corner, you will behold a frightened, trembling, apologetic, cowardly crook. Better get him then, or he will try to get you later. He belongs to most of the medical societies, but never attends; does not permit his dues to become delinquent for reasons quite obvious. Avoid him. His selfish ambition has hardened his heart. You are better than he and he knows it.

The medical croaker—he neither hinders nor helps. He would not be missed, yet you wish him no harm. What the majority are for, he is against. You are in the wrong, he is always in the right; never succeeds well and admits it, but it is not his fault; takes no part in discussions at society meetings, but does a lot of barking and criticism in private; makes a great fuss and flurry about weak medical laws and wonders what is the matter with the profession, but does nothing himself but rant.

He is strong on the laymen, but weak on the medical brethren. Belongs to no medical societies—the A. M. A. is a trust; prefers proprietary medical literature to standard medical journals; profane against quackery, but will sign a death certificate for a chiropractor.

Don't be a broker. Don't be a croaker.

DISCUSSION

DR. E. M. SHANKLIN (Hammond): One thing that Dr. Hollis said that struck me particularly is the management of luetic cases that come to the specialist. There are, in Indiana, I take it, a few men who are fully and competently equipped to personally direct the treatment of lues. But there are so few of the Indiana eye, ear, nose and throat men who come under that classification that as a general rule I should say these cases, in all fairness, should be referred to the internist.

That leads to another suggestion: We depend to some extent on referred cases coming to us from the general practitioner, and yet too often are we prone to forget the source from which these cases come. I will refer to just one specific instance. A case is referred to a specialist for a tonsil operation. The routine examination of the patient develops that there is an albuminous condition of the urine. I happen to know that there are specialists who will undertake to correct this condition of the urine, notwithstanding the fact that the case has been referred directly from the family physician of the patient. I believe such practice is wholly wrong. I do not believe that any man doing eye work has a right to undertake the treament of a nephritis. They should in all instances be referred back to the man who sent the case to you.

DR. O. C. BREITENBACH (Columbus): Only one word with reference to a hybrid that the profession harbors. I refer to the man, who, because of his lack of knowledge of present day medicine, and judging his confreres' ability by his own, apparently in sheer desperation refers his wife or children to a chiropractor in the community when his feeble efforts are incapable of stimulating feelings indicative of returning well being.

I also have in mind that species of practitioner who hovers nigh to the optometrist, seeking his favor, and finds it justifiable to refer eye work to him in hopes that the optometrist will in turn refer nose, throat and ear cases to him.

We come in contact with this individual in every community, and I, personally, feel that the man who has no more regard for the sanctified portals of regular medicine than to allow the pollution mentioned, ought to be a discard of legitimate medicine. An innate sense of self respect ought to hold the legitimate medical man in his own chosen field. The base interests of the optometrist and chiropractor are thus fostered by this individual whose main object in carrying out a public trust should be the branding as vicious the influence of all cults of this description.

DR. C. J. ADAMS (Kokomo): My county society has appointed a Publicity Committee to tell the community what we are trying to accomplish. We are not aiming to fight the chiropractor or the optician, but we are aiming to let people know who and what the medical profession is composed of, and just exactly how much time, work and expense the medical man has been put to to gain his education; just what his ability is and what he can do and is doing. We haven't gotten the thing to working yet. I don't know of any other medical organization in this state that is doing anything of the kind. I believe we are going to chase some of the quacks out of our community.

DR. W. A. HOLLIS (closing): The main idea is to cut out commercialism, be progressive, play fair, do the right thing, and remember that we all live in glass houses; be on the square, practice your specialty, and, as I said, don't try to be a Jack of all trades.

Remember, you have colleagues who are your friends, and they reach beyond the confines of our specialty. We have to work with them, and we can accomplish nothing without their aid.

"THE PHYSICIAN"

MYSTICISM AND SYMBOLISM IN RELATION TO THE HISTORY OF MEDICINE*

By
FRANK B. WYNN
INDIANAPOLIS, INDIANA

A consideration of mysticism, medical symbolism and history suggests to the average physician's mind something very remote and unrelated to the present. His thoughts go fleeting through the centuries to the distant past of the ancient Assyrians and Chaldeans; to the early Egyptian dynasties; or to the less remote medical mythology of the Greeks. It does not occur to him that despite the progress in fundamental science and the practical arts of civilization, the refinement of medical mysticism in those ancient days puts to shame the crude practices and beliefs of our own time. One may learn medical mysticism from the "Medicine Man" of the Black Feet Tribe in northern Montana; or at the annual snake dance of the Hopi Indians in Arizona. It is exemplified in the common buck-eye carried in the pocket to ward off rheumatism; or the mad-stone of famed value when applied to the bite of a rabid animal. Its superstitious influence is apparent daily in the precious stones treasured or the jewelry worn. It speaks powerfully in many who look askance at Friday and the number thirteen, and in the farmer who plants by the signs of the moon.

*Nineteenth of a series of articles by Dr. Wynn which will appear regularly in THE JOURNAL.

These are familiar illustrations of individual customs and beliefs in our own day, showing how deeply ingrained into our inherited nature are the influences of superstition. If more magnificent examples are sought showing systematic and widespread organization in support of mystical healing, one needs but turn to the splendid Christian Science Temples to be seen in every city, where the reality of the senses is in large measure denied; whose "healers" claim divine influences, even alleging cures by "absent treatments." Strange as it may seem at first thought, there is a striking similarity between the ancient Greek Temples of Aesculapius and these modern edifices devoted to mental healing. At one time these temples scattered throughout Greece numbered over three hundred. Like the "healers" of the Eddyites today, they claimed supernatural power. In time of epidemics, the priestess or goddess Hygeia, would come forth, in her hand waving the serpent, emblem of healing, over the multitude. Thus all were blessed and supposedly the afflicted were healed or the well protected against evil influences causing disease. Eddyism, however, is only a poor second edition of ancient Aesculapianism, for the latter whilst assuming the exercise of supernatural healing, wisely sought the aid of natural forces as well. Accordingly the Temples of Aesculapius were located with extreme care, having due regard for the charms and healthful benefits of the outdoors. As the sites of these institutions they sought refreshing groves, the purest mountain air, the most brilliant sunshine; pure lakes and streams and health-giving springs. They were in truth the first Health Sanatoria. From the priestess or goddess (Hygeia) of the Aesculapian temple has come down to us the modern word *hygiene*. Thus it is seen that Eddyism is nothing new, in fact only a reversion to ancient medical mysticism, but without its chiefest virtues.

If study be made of any race or tribe of people in their early evolution it will be found that religion and medical practice go hand in hand. It was true of the ancient Chaldeans, the early Egyptians and the Greeks as it is true of barbarous tribes and healing cults in our own generation. Superstition and mysticism pervade all medical beginnings. A very natural outgrowth of evolving medical mysticism is medical symbolism. A symbol is some material thing which stands for an idea, a principle, a creed. Most symbols typify aspiration for better or more glorious things. Some however stand for baser thoughts and designs, as the saber of Mars betokens a bloodthirsty purpose. The Old Testament scriptures are built upon symbolism. Under the New Testament regime the Mother Church perpetuated symbolism in modified form and elaborated it to a point where revolt came in Protestantism. The very heart and brain of the Masonic order is symbolism. The human mind is so constituted that it craves representation of its ideas and ideals in symbols.

Since scientific methods have separated to a large extent the mystical from the medical beliefs and practices, symbolism has had small place in medicine. What remains is not to be construed as inconsistent with scientific ideals. As scientists loving the truth we can do naught else than turn with sympathetic interest to the struggles of our profession to emerge from superstition and barbarism. If certain symbols come down to us from the ancient days, let us view them with genuine historic reverence, as representing phases of evolution toward a higher civilization.

The eagle is the most ruthless murderer of inoffensive birds among the feathered tribes. As such we detest and abhor its rapine. But on top of the American flag-pole, as a symbol typifying aspiration and liberty we idealize it. So in medicine, the symbols which tradition, mysticism and history have passed down to us are interesting as standing for the evolution of science; and we may be pardoned for perpetuating them as symbolic of the good and true, from whatever age derived. As physicians it is well that we know something of this symbolism and its suggestive meaning.

Most symbolic representations bear the mark of oriental origin. True they have descended to us through the Hebrews, the Egyptians and the Greeks. The symbolism of the Greeks always had an eye to curved lines, the grace of form, color, symmetry—in a word, beauty, Not so with oriental symbols which stood for an idea, a principle. For example, the ox typified patience; the serpent, wisdom and prudence; the eagle, aspiration.

In approaching the subject of medical symbolism only the briefest references need be made to Greek Mythology. Apollo, the sun god, and worshipped as the god of medicine, is said to have derived the power of divination and healing through the slaying of the serpent Python. Aesculapius was the reputed son of Apollo. Homer records in the Iliad that Aesculapius went upon the Argonautic expedition. So successful was he as a physician that Pluto became envious and complained to Zeus who slew him with a thunderbolt. At the request of Apollo he was placed among the stars. Hygeia was the daughter of Aesculapius and the high priestess of the temples which bore his name. Thus it is shown that medicine had a most noble mythological lineage. It was from this heroic period in early Greek history that most

of the medical symbols sprang into common use, although their origin must be traced in most instances to the Orient.

The most ancient and generally employed medical symbol has been the serpent. If study be made of almost any race of people, it will be found that in their primitive period the serpent appeared as the emblem of wisdom and healing. It was true of the Assyrians and Babylonians, the Egyptians, the Greeks and even the Mound Builders of America. The American Indians of the present day exemplify the same fact in their snake dances. This curious truth would appear to point to the common origin of mankind. Serpent worship prevailed in the Orient. The serpent was considered sacred, and stood for prudence, health and immortality. Its emblematic significance of health and life no doubt came about through the fact that each year it was revived from a state of lethargy and its skin cast off—typifying to the mind of the Oriental seer, return of health, new life, resurrection.

In the birth and growth of the Hebrew religion the serpent figures largely. While in the fall of Adam and Eve it stood for evil, it was not always so. When the Children of Israel were being led out of Egypt through the wilderness by Moses, it is recorded there were murmurings, whereupon the Lord sent fiery serpents among the people, which bit them. Moses prayed for them. Then the Lord commanded him to make a fiery serpent of brass and hoist it upon a pole and directed all those who had been bitten to look upon this image and they would be healed.

It was almost four hundred years after the time of Moses that Aesculapius and his followers dominated Greek medicine. Whilst he, like Homer, is catalogued in the mythological realm of Greek History, there certainly must have been some such medical personage of extraordinary personality and genius. He and his followers initiated the movement which brought medicine out of the darkness of mysticism into the light of scientific methods, under Hippocrates. Their teachings, such as they were, evidently made a tremendous impression upon intellectual Greece—apparent even in Hippocrates himself, as well as in the great philosopher Socrates. In the realm of Grecian Art also, Aesculapius occupied a prominent place. Statues of him decorated most of the temples of healing. The one at Epidaurus is most familiar to us because it was brought to Rome in 292 B.C. to avert pestilence. It remains today in the Louvre as a precious heritage of early Greek art.

From a study of these statues much of our present knowledge of medical symbolism in early times is obtained. A wreath of laurel is upon the head indicative of the high esteem in which medicine was held. The dog was frequently associated, typifying the watchfulness and faithfulness of the physician. The cock was another significent emblem. On the one hand it stood for sacrifices in the interest of the suffering; and on the other represented the sacrificial offering generally made by grateful patients for their restoration to health. This custom was beautifully shown by the dying philosopher, Socrates, in the following dialogue: "Crito, I owe a cock to Aesculapius; will you pay the debt?" "The debt shall be paid," responded his friend.

Some of the Aesculapian statues represent the extended hand, holding a fir-cone. Like the serpent, this medical emblem is of Oriental origin. The "Tree of Life," from which it was obtained, was sacred and guarded by priests. To the minds of the ancient Assyrians and Babylonians, the fir-cone possessed the power to repel demons and impart "the breath of life."

But most constant of all the Greek symbols of medicine was the Staff of Aesculapius. The story of its origin is told in the Iliad. One day when on the Argonautic expedition, Aesculapius sat in his tent treating Glaucus. A snake entered and entwined itself about his staff, thus endowing him with wisdom and prudence. Ever after it was his constant companion in his labors. The Aesculapian staff adorns the badge of the American Medical Association, and is worthy to be accepted as the world-wide symbol of our profession.

Curiously, almost unaccountably, the *caduceus* or Wand of Mercury (Greek, Hermes) has been permitted in modern times to usurp the place of the Aesculapian Staff as a medical emblem. Its use became so general, especially during the world war, that it appears doubtful if it will ever be displaced. It will be recalled that Mercury was a messenger of the gods—indicated by the wings on the staff. In ancient times the *caduceus* was the badge of neutrality, of commerce and trade—the arts of peace as opposed to the destruction of war. Upon the wand the serpents do not stand for wisdom and healing, but for peace. This is indicated by the traditional story concerning the birth of the *caduceus*. Mercury came upon two snakes fighting, whereupon he smote them with an olive branch received from Apollo. He was surprised to find them cease contention and become friends. If we dared modernize the ancient interpretation of the *caduceus*, very fittingly the wings might typify messages of scientific and spiritual truth from on high; and amongst professional colleagues the serpents might stand for a mutually helpful peace; and on earth good will to men.

A very interesting group of medical symbols should be considered separate from those which have preceded—the talismans and amulets. As we know them, they were the product largely of ancient, oriental mysticism. Few persons realize that many of the ornaments worn upon the body for personal adornment, trace their birth to very ancient mythology. Originally they were worn as charms, supposed to possess magic power to avert evil influences and preserve health.

Talismans owed their birth to astrology. Why should we marvel at this? What a soulless creature is he who in the solitude of night can gaze at the star-lit dome without a thrill of wonderment or the yearning to know and understand it all? With the very beginnings of intelligence in the human race, came the star-gazers. Out of their efforts grew astrology. Even the noted Roman physician, Galen, wrote extensively upon this subject. In time the dreamy mysticism of astrology gave place to the wonderful science of astronomy.

Talismans are astrological charms or stones on which are engraven letters, figures or characters supposed to have great virtue in averting evil or disease. By ancient usage they were made when two planets came in conjunction. Sir Walter Scott in "The Talisman" tells of the "Lee-penny" which is still reputed to have virtue in stopping blood or canine madness.

Quite similar in form and use to the talismans were the amulets, except they were not fashioned under astrological influence. The image of Raphael (healer of God), patron angel of early Christians, was frequently found on both talismans and amulets. Images of the thing dreaded were sometimes placed upon amulets to frighten the real object of fear away. Frequently inscribed upon amulets were certain geometric figures or numbers. Among the Chaldeans the number seven was sacred, and according to their belief possessed a charm to ward off evil influences. The *crux ansota* was an Egyptian symbol of life, a cross worn suspended from the neck.

Amulet rings were held in high esteem in early times. The Signet of Solomon is said to have played a considerable part in the building of the temple. The Physician's Ring was an amulet prized both for its magical symbols as well as for its stone setting. Sapphire was reputed to shield the wearer from pestilence; coral was supposed to be curative for nervous and mental afflictions; and the opal was considered a stone of evil omen.

Of all amulets the Pentacle or five pointed star is the most ancient and honorable. It was called "Pentalpha" by Pythagoras, whose philosophy was that all knowledge and wisdom sprang from numbers. It constituted the legendary "Key of Solomon" which has entered so largely into history. Ruskin defined it as the Symbol of the Trinity. Long before the Wise Men of the East followed the lead of the Star of Bethlehem, the Pentacle was thought to have mysterious power. Like the horseshoe in our own day, it was employed to keep off witches, and bring good fortune. It was used as the heading of books written by the early Greek Christians. Goethe makes Dr. Faust place a Pentacle over his threshold to keep out the evil one, yet Mephisto got in. Among both ancient Greeks and Romans it was the symbol of health. Over each of the five arms of the star was placed the letter entering into the spelling of the word Hygeia (Greek) or Salus (Roman). This knowledge of the ancient meaning of the Pentacle, gives new significance to the stars on our national emblem.

In more recent times, it may be mentioned, amulets were issued in the form of "Touch Pieces" by Henry the VII to persons whom he had "touched" for the "Evil." In our own time the "Medicine Bag" of the American Indians is a familiar illustration of an amulet. It is made from the skin of a serpent or animal, and contains secret and mysterious substances, suggested by dreams inspired by the Great Spirit.

So much in brief is the medical symbolism which has come down to us from the far east, more particularly through Greek Mythology and the classical period of its civilization. Contrasting the highly mythical period of Aesculapius with the even more remarkable period of scientific inquiry inaugurated by Hippocrates, one is inclined to ponder what may have been the bearing of the latter toward the mysticism of the preceding ages. I am pleased to find abundant proof of his reverential attitude toward his predecessors. Sweeping as was his search for truth and keen his judgment of error, he yet had the modesty of a finer wisdom. Despite his vast knowledge and marvelous influence he did not arrogate to himself any subtle powers or seek to capitalize the mystical beliefs of the people for his own glory. On the contrary, note the humility of the truly great, when in the Hippocratic Oath he acknowledges a power greater than man and his indebtedness to those who had gone before. If in the Oath he lifts his thoughts toward Apollo the God of Medicine and pays tribute to the Aesculapians, it is not to be construed that he accepted unqualifiedly the medical myths of that period, but that he looked upon these medical symbols in an age of mysticism as an expression of the struggles of medicine to free itself from barbarism and superstition. With tender compassion he looked upon these beliefs and read into them the scientific hope of the future.

In this brief review of medical symbolism may we not have brought to attention one of the strongest attributes of Hippocrates—greatest physician of all time. If he, laboring in an ancient civilization which had been saturated with medical mysticism, was yet able to accomplish stupendous advancement in banishing superstition and establishing scientific truth, may we not learn from his methods and take courage from his action, in laying hold upon similar problems in the present age. And let us not with ostrich-like cowardice, hide our minds from the existence of superstition and mysticism in medical practice in modern civilization when in truth they are found upon every hand. The *nomen* (name) is different but the *numen* (the thing itself) is much like that of old. Marching under the same banner of mystic belief and practice as in the ancient days are Schlatterism, Dowieism, Eddyism, Chiropracticism and the like—a heterogeneous multitude of erratic, misguided, ignorant or venal-minded individuals. As Hippocrates spoke, not with the voice of cynicism, but in the spirit of charity, so let us not without just ground attack the votaries of isms and cults which feed upon medical mysticism. Nor should we allow pride to deter us from stooping to garner the grains of truth from the chaff of their errors.

On the other hand great injustice would be done the Father of Medicine in assuming that in his treatment of mystic beliefs and cults he shunted duty for expediency. Whilst his wonderful life was characterized chiefly by his zeal in the promulgation of scientific truth, and ethical conduct, he was equally determined in his opposition to sham. Let us not show less courage in the present generation. Never through our own neglect of duty in practice should these sects find justification for existence. Or when once established in the graces of public respect, we should not through a false conception of professional pride, disdain to lay bare by systematic and unrelenting exposure the loss of life which such practices often entail; or the golden opportunities wasted when sane and intelligent medical procedure might preserve or restore health. Altogether too soft has been our treatment of these fallacies. What respect have we for those cloaked in the garb of moral or religious creed who disdain to point to evil practices and fail to seek their reformation? Is not the medical profession perhaps in need of a spiritual awakening—a conversion which will inspire zeal and merciless exposure of medical shams as well as promote the cause of scientific truth?

USE OF DRUGS IN INFANCY AND CHILDHOOD

In order to establish a standardized list of drugs essential to the treatment of the diseases of infancy and childhood, Henry F. Helmholz, Rochester, Minnesóta (*Journal A. M. A.*, Oct. 8, 1921) selected from the pharmacopeia a list of sixty-one drugs. This list he sent to ieghty-four men who are limiting their practice to pediatrics, with the request that they check the drugs listed and add to them any drugs which they considered essential in their practice. Of the eighty-four men, sixty-four responded. Only mercury in some form and santonin, on the list submitted, are used by all sixty-four men. Besides these, silver, arsenic, iron, sodium bicarbonate, cod liver oil, and at least one representative of the opium series, the antispasmodics, heart and circulatory stimulants, hypnotics, laxatives, antipyretics, anthelmintics and urinary antiseptics, were used by sixty men of the sixty-four. One-half of the men used forty-three of the drugs indicated on the list. Fourteen added milk of magnesia, and three or more added benzyl benzoate, hyoscyamin, chloroform, agar-agar, creosote, chenopodium, glycerin, and tincture benzoin compound. One man added thirty-eight drugs to the list. The drugs in this list can be readily divided into four groups. The drugs in the first group have specific indications; for example, mercury, arsenic, quinine, santonin, male fern, and so forth, act directly in destroying parasites, and the drugs such as silver, hexamethylenamin and the salicylates, have definite antiseptic powers for destroying bacteria. The indication for the use of these drugs is usually given with the diagnosis of the disease. The drugs in the second group regulate the function of the different organs; for example, digitalis, the group of laxatives, and the diuretics. The third group is essentially for the symptomatic treatment of disease, as morphine for the relief of pain. The fourth group consists of drugs that are used for a specific purpose, and for practically no other, such as phosphorus in the treatment of rickets and spasmophilia, mustard for counterirritation, and phenol (carbolic acid) for the infections of the middle ear. The treatment by drugs of diseases in infancy is influenced in its effectiveness by the factor of nutrition and growth. This is perhaps best expressed by the statement that as long as a child eats and digests well there is a good chance for recovery. A drug which acts favorably on the disease focus but interferes with the nutrition of the child is harmful. The effect of the so-called tonic treatment during the active stage of the disease is another example of the failure to recognize the nutritional factor in disease.

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EDITORIALS

A NEW SYNTHETIC LOCAL ANESTHETIC

A few weeks ago a new synthetic local anesthetic, the trade name of which is butyn, was placed on the market after having been approved by the Council on Pharmacy and Chemistry of the A. M. A. While most of us have been well satisfied with cocain as a topical application to produce local anesthesia, and procaine and apothesine for infiltration anesthesia, yet we are always pleased to find something that is either better or does away with some of the objections to these preparations. According to the report concerning clinical and experimental use, butyn is noted for the striking rapidity of its anesthetic action as also the depth and completeness of anesthesia produced in the average case, when used as a topical application for surface anesthesia. Generally speaking it is used just as cocain is used for surface anesthesia, namely, in two to five percent solutions, and in one-half percent solutions for infiltration anesthesia. On the conjunctiva it has one objectionable side action, and that is the production of a hyperemia, though this effect is controlled readily by the addition of epinephrin to the butyn solutions. It has the advantage of not dilating the pupil nor drying the cornea, as does cocain, and having no ischemic effect, it does not contract the tissues, as does cocain, thus making it especially desirable in nose and throat work. As far as toxic effects are concerned, that question will have to be decided by accumulated experience in the use of the preparation, and up to the present time clinical trial seems to indicate that it is no more and perhaps less toxic than cocain. Of decided value is the fact that butyn requires no narcotic blank and it is not thought that the drug is habit forming to the slightest extent.

With a growing tendency to do more and more surgery under local anesthesia, the value of procaine, apothesine and now butyn becomes of especial interest to all medical men, and we shall watch with interest the career of this new synthetic local anesthetic which bids fair to take a fixed place in our surgical work.

ANOTHER INFLUENZA EPIDEMIC

Several weeks ago reports were received showing that influenza was prevalent in many foreign countries and extending its sphere of action. Since then we have learned that the epidemic lasts from four to six weeks, that the type of the disease is much milder than in 1918, and broncho-pneumonia is the chief complication. A general spread of the infection is indicated from the fact that the disease has been following the main lines of travel and has finally developed in New York and is gradually spreading throughout the United States. It is now prevalent in several sections of Indiana, there having been reported a number of cases in Indianapolis and other cities. The character of the disease as it appears in this country is the same as that which has been prevalent in European countries, being mild in type, and broncho-pneumonia is the chief complication, but with a very noticeable lower percentage of deaths. There is, however, a tendency for the development of accessory sinus diseases and some neuroses which have a tendency to prolong the convalescence. Notwithstanding the fact that very much has been done in the way of experimenting as to the most efficient means of treatment, including extended trial with vaccines, but little has been accomplished in retarding the progress or limiting the ravages of the disease. Little or no protection against pneumonia has been afforded by the use of vaccines. Prevention seems to be of most importance. Attention to the recognized hygienic regulations is of more value than anything else. The reassuring feature of the present outbreak of the epidemic is that the disease is mild in character.

CAMOUFLAGED SALESMANSHIP

Have you ever heard stock salesmen say, "Our company has been passed by the State Securities Commission. Yes, sir, the State endorses this proposition and I guess if it is good enough to be endorsed by the State it is good enough for you!"? It is known that stock salesmen often have used as a talking point the fact that they are representing companies that have passed the Securities Commission to try to make their prospective buyers believe that the State endorses the stock they are selling.

Right here we want to impress this thought firmly in your mind—the State *does not* endorse any stock that is passed by the Securities Commission. In fact, it specifically says in the Blue Sky Law that one of the qualifications of advertising the fact that a stock is certificated is that there must also be a statement, printed in bold type, to the effect that " the Commissioner in no wise recommends such securities or other property".

So, when a salesman tries to impress you with the fact that his stock has been passed by the

Blue Sky Law, just remember this little part of the Blue Sky Law outlined in this story. It may save you money.

The Securities Commission examines properties for which stock is to be sold and makes certain restrictions as to how much stock shall be sold and on what basis. But it does not in any sense attempt to say that the proposition is a good one or a bad one.

The slogan, "Before You Invest—Investigate," still holds good. You are the one who is to decide how you are going to spend your money. Be wise and find out all about the proposition before you let somebody else use your earnings.

INCOME TAX RETURNS FOR 1921

The time is again at hand when physicians, along with all other individuals, must file their federal income tax returns for 1921. This report must be in the hands of the collector of internal revenue of your district before March 15, and must be accompanied by a remittance covering at least one-fourth of the tax for the year. Since last year several changes have been made in the law. The law at present requires that a return shall be made by the following individuals:

1. Every individual having a net income for the taxable year of $1,000 or over, if single, or if married and not living with husband or wife.

2. Every individual having a net income for the taxable year of $2,000 or over, if married and living with husband or wife; and,

3. Every individual having a gross income for the taxable year of $5,000 or over, regardless of the amount of his net income.

The normal and surtax rates for the year 1921 under the new law are the same as for the year 1920. However, the specific exemptions have been increased, except in the case of a single person, who is entitled to an exemption of only $1,000 as heretofore.

The head of a family, or a married person living with husband or wife, is allowed an exemption of $2,500, unless the net income is in excess of $5,000, in which case the allowable exemption is only $2,000. The old law allowed a flat exemption of $2,000 to the head of a family or a married person.

An exemption of $400 is allowed for each dependent under 18 years of age, or who is incapable of self-support because mentally or physically defective, instead of $200, as under the revenue act of 1918.

Practicing physicians are permitted to take into consideration the legitimate expense incident to their practice in addition to the exemptions for dependents and other general deductions. In view of the fact that some physicians failed to take advantage of some of these deductions last year, we are publishing detailed information herewith:

General Exemptions. If married, the physician may first record a deduction this year of $2,500, if his income is $5,000 or less, in place of $2,000 last year from his gross income. If single, he may deduct $1,000. For each child or dependent under the age of eighteen he is allowed a further deduction of $400, instead of $200, as last year.

Office Rentals. If the physician owns his own house and has his office in one room of that house, he may *not* claim a deduction for office rent. But if he pays rent to another person, for the use of the office space, he is permitted to deduct the amount expended for the rent of that office.

Automobile. Exemption may be claimed for the cost, repair and upkeep of automobile or other vehicle which is used exclusively in the conduct of a physician's business. The salary of the chauffeur, if most of his time is spent in driving to professional calls, may also be deducted. Amounts spent for the hire of taxicabs, and also street car fares, *on business calls,* may be taken off.

Assistants. Exemptions may be claimed for the salary of a nurse, laboratory assistant, stenographer, or clerical worker in the office, whose work is connected with the doctor's professional duties. Deduction also may be made for the salary of a maid or other person who spends her time in opening the door or answering the office telephone. Deductions may be made for that proportion of wages or salaries paid to employes in return for service directly in connection with practice or in connection with the care or treatment of patients.

Medicines, Instruments, Supplies. A doctor may take off an item for medicines used in the office in the treatment of patients. Bandaging, laboratory material, and all other supplies necessary to the running of a physician's office are permitted to be deducted.

On surgical instruments, he may charge off on an instrument with a fair average life of five years, one-fifth of its original cost each year.

General Office Expense. Telephone bills in their entirety may be deducted, because it is understood that the telephone in a doctor's office, even when that office is in his home, is almost entirely used for professional purposes.

Exemption is permitted for the correct proportion of expenditures made for light, heat and water. Depreciation of 10 percent of the original cost each year is allowed upon office furniture, it being considered that furniture should last about ten years.

Library. Most doctors have a medical library more or less extensive. In the courts it has been decided that after ten years a medical book is out of date and therefore worthless. For this reason the doctor is allowed a depreciation item of ten percent each year on his medical library.

Taxes, Licenses. Any taxes which a doctor may be required to pay upon materials which are required for his work may be deducted, and all licenses which he is by the nature of his business required to take out may be taken off of his gross income reported. This includes his license to prescribe alcohol, narcotic license, automobile tax, local occupational taxes and so forth.

Professional Dues. Also, a doctor may deduct dues paid to professional associations to which, in the interest of his business, he belongs, and exemption is also allowed for subscriptions to all medical newspapers and journals.

When to Deduct Unpaid Debts. If his books are kept according to the "Cash Receipts and Disbursements" system, he may not charge off any unpaid debts, because as explained in the tax manual, "if his books are kept according to this system, he is only reporting as gross income those accounts which have proved to be good, and therefore bad accounts cannot be deducted because they have already been excluded.

If the books be kept on an "Accrual" basis (that is, on the basis of expenses actually incurred and payable even though not yet paid, or income earned although not yet collected), it is permitted that the doctor may charge on his income tax blanks all debts which are definitely ascertained to be worthless during the year past.

In the same way, the doctor is permitted to claim deductions, for all other expenses within the scope of his profession, and the amount of his tax is determined on the net income which remains after all of these items have been deducted.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

THE JOURNAL office is in need of the January 15, 1921, issue of the *Journal of the A. M. A.* (Volume 76, No. 3) to complete the files for binding, and the A. M. A. office is unable to furnish same. Accordingly, if any reader has this copy which he does not care to retain for his own files, THE JOURNAL will appreciate the courtesy in sending it in to this office for the files here.

EVERY county medical society in the United States has received some resolutions calling for reforms in the A. M. A. and indicating that reforms can be accomplished only by change of leadership. Perhaps those who for many years have dictated the policies of the A. M. A. may see the "handwriting on the wall" and change their tactics, but we haven't much faith in reformation.

WE published in the January number of *The Journal* the obituary of Dr. Greenly V. Woollen, of Indianapolis, who died December 10. Dr. G. W. H. Kemper, for many years historian of the Indiana State Medical Association, calls our attention to an erroneous statement in the obituary which credits Dr. Woollen with being one of the founders of the Indiana State Medical Association. Inasmuch as this Association was founded in 1849, and Dr. Woollen was born in 1840, it is very evident that he had nothing to do with the founding of the Association, even though he was actively interested in it during some of the earlier years of its existence.

INDUSTRIAL Insurance Companies usually want a doctor to dress a wound for a dollar and then spend the rest of the month making out reports for them. They then kick on the bills, and they make it a rule to kick, no matter what the charges may be. The worst of the situation is that when some doctor has a controversy with an insurance company concerning a perfectly modest bill, a number of his confreres will come forward with the statement that the bill is excessive, notwithstanding the fact that, under similar circumstances, they themselves would try to collect satisfactory fees. Such is the cooperation and loyalty of certain men in the profession.

INDIANAPOLIS now boasts of some chiropractic colleges and, while Fort Wayne with its numerous chiropractic schools may have set the pace, it remains to be seen if the capital city does not eventually take the lead because of the fact that it is the capital of the state, centrally located, and, with its large population, offers a fertile field for the acquisition of students. It is possible that the State Board of Medical Registration and Examination may not relish the sight of chiropractic colleges right in the shadow of the capitol building, but there is no use in worrying about a little thing like that. We have been unable to enforce our medical practice acts, so why look with disfavor upon chiropractors or any other medical law breakers?

OUR editorial note in the January number concerning discrimination in the awarding of hotel reservations for the annual session of the A. M. A. has brought down upon our heads the wrath of the lordly secretary of the A. M. A. who seemingly disputes the right of anyone to question his acts. The subject under discussion is not settled by specious and misleading explanations nor by questioning the veracity of anyone who calls attention to the matter. Facts are stubborn things which are hard to down. To use an old saying, "It is a long lane that has no turn," and as we are accumulating some rather interesting information, we shall have something to say upon the subject later.

THE chiropractors are getting more nervy every day. In Ohio the "State Chiropractic Institute", located in Columbus, has been sending out to various physicians of Ohio invitations to take a "two weeks' course of instructions, *for physicians exclusively,* in the technic of chiropractic adjustments". The amusing feature of the announcement contains the information that this is a new field of scientific research for the medical profession. Evidently this is a new species of advertisement and it will redound to the profit of the chiropractors through the mistaken notion on the part of the public that chiropractic adjustments have a scientific basis and that the regular medical profession, in its long and honorable career, has been unable to discover the value of a method of treatment which has been nurtured in ignorance and quackery.

THAT there is profit in a well managed company furnishing medico-legal defense in malpractice suits is attested by the fact that the Medical Protective Company of Fort Wayne now has over one million dollars in assets. An enormous business has been built up by this company which makes a specialty of the medical defense business. In justice to the company it may be said that it never has defaulted to the slightest extent on a single contract ever issued, and all of the officers and directors of the company have established reputations for integrity. It is unfortunate that occasionally a suit for malpractice is brought against a physician, usually without justifiable cause, but it is fortunate that protection may be secured through insurance that guarantees appropriate attention to the interests of the physician who has been sued.

IN asking for increased patronage of the advertising section of the Journal of the Michigan State Medical Society, the editor calls attention to the fact that the expense of publication has increased over four hundred per cent. during the past five years, with little chance of any marked decrease in the cost for some time to come. The necessity for increased incomes in order to maintain or improve the present standard of medical periodicals is the excuse for asking the readers of state journals to increase advertising income by patronizing the advertisers whenever consistent to do so, and thus making the advertisers feel that they are receiving adequate returns for the money expended. What is true concerning the publication of the Michigan State Journal is true of the publication of every other state journal, but the difficulties may be met by the co-operation of everyone interested in the success of the state medical journals.

THE doctors who make up the rank and file of the medical profession should bear in mind one fact, and that is that not one of the various schemes to socialize medicine has developed in the minds of lay individuals. They are proposed and supported by erstwhile leaders in the medical profession. The public is not demanding any such schemes as "pay clinics" as inaugurated by Cornell University, or "community clinics" advocated by Hugh Cabot of the University of Michigan, or the fifty-seven varieties of free clinics for the well-to-do proposed by public health officers. The people in the United States, even the poorest, receive better medical and surgical attention than is given the people of any other country in the world. It is time to analyze the motives of the leaders in our profession when they propose radical innovations in the way of care for suffering humanity. Usually there will be found a "nigger in the wood pile" in the form of a desire for personal preferment or profit. However, "the worm is beginning to turn," and henceforth the uplifters in our profession will have to watch their steps!

IT IS unfortunate that the wording of an editorial note in the January number of *The Journal* gives occasion for doubt as to the character of the services being rendered by the chairman of the hotel committee for the St. Louis session of the A. M. A.

As a matter of fact the intention was to call attention to the large number of reservations made by the Secretary at the leading hotel where the annual session of the A. M. A. is held, with early subsequent announcement by the hotel that all available accommodations had been reserved, and that if one played in luck perhaps good reservations would be secured through the chairman of the hotel committee.

While the wording in the editorial note could be interpreted as a reflection upon the chairman of the hotel committee, yet no unfavorable meaning in that direction was intended. Sufficient evidence is at hand to indicate that there has been considerable jugglery in the assignment of hotel reservations for the annual sessions of the A. M. A. and it was with the idea of calling attention to an abuse of position or privilege, or both, that brought forth the editorial note to which attention is called, and which may have led to a misinterpretation of the meaning concerning the fairness of the chairman of the hotel committee for the St. Louis session who, so far as we know, is not engaged in the practice of which complaint is made.

QUITE a large number of county medical societies in Indiana have passed the resolutions sent out by a medical advisory committee of which Dr. McMechan, of Ohio, is secretary. Among the evils aimed at by the resolutions are:

(1) Foundation control of "full time" medical education.

(2) Lay board domination and the "closed shop" hospital.

(3) Socialized state medicine, subsidized community health centers and hospitals under political or university control.

(4) Legislative dictation of therapy and fees.

(5) Demoralization of medical standards by the expansion of cults.

(6) Exploitation of the specialties by lay technicians.

The resolutions call upon delegates to the A. M. A. to vote for a change of policy and leadership in the A. M. A. There are good reasons for the adoption of the resolutions, and there is every reason why the House of Delegates of the A. M. A. should carry out, in the main, the suggestions offered.

THE members of the Hendricks County (Indiana) Medical Society are opposed to treating people who patronize pseudo-medical cults and who are in the habit of calling regular physicians as a last resort or for the purpose of signing the death certificate. At the meeting, January 27, 1922, the Society passed the following resolutions:

"Whereas, certain pseudo-medical cults, including Christian Science practitioners, chiropractors, etc., are showing great activity with their propaganda, and

"Whereas, some people employ these pseudo-healers to treat dangerous diseases and continue treatment with said pseudo-healers until the disease becomes incurable or until the patient is almost dead and then a regular physician is called to take charge of the case in order that he may sign a death certificate; therefore, be it

"Resolved, That the members of the Hendricks County Medical Society refuse to attend patients who have treated with the pseudo-healers until in a hopeless condition or until nearly dead; and that members refuse to sign death certificates under such conditions; and be it further

"Resolved, That members refuse to treat patients who are at the same time taking treatment from the pseudo-healers."

INDIANA doctors may be interested in knowing that there is an organized ring conducting fake soliciting schemes, and that this ring owns a clearing house of information to aid in the collection of money. The ring maintains a list of possible prospects which is furnished to the individual members of the ring, together with such information concerning the nature of the prospect as seems necessary in order to effect a collection with him. Very naturally an attempt is made to make it appear that the object for which funds are solicited is a most deserving one and should be supported by business and professional men. The ring is able to furnish a subscription list containing signatures of heads of large business houses, manufacturers, and professional men, showing that these firms and individuals already have contributed, and the amount contributed. These lists usually are subscription lists of some scheme recently promoted, and from which all trace of the old plea has been removed. The ring is constantly exchanging ideas and suggestions, not only of lucrative districts but upon good schemes. Better Business Bureaus all over the country are warning merchants, professional men, and others against these fake soliciting schemes, and it is suggested to all those who are tempted to contribute to any cause, or to aid in any promotion scheme, that full information be obtained from the nearest Better Business Bureau before parting with any money, and in this way perhaps avoid being duped and defrauded by some smooth solicitor.

ACCORDING to the February number of the *Journal of the Michigan State Medical Society* the representatives of the Medical Department of the University of Michigan met with the

Council of the Michigan State Medical Society in Detroit early in January and discussed very freely the future activities and policy of the University as it pertains to medical issues and especially the new form of danger that threatens us—socialized medicine. From all we can learn there seems to be a desire to get together on a constructive policy, and the University authorities volunteered the information that they desired the good will and co-operation of the profession of Michigan. It was claimed by those in attendance at the conference that the University was not in favor of so-called State Medicine, and yet no explanation was made concerning the various moves on the part of the University, including the proposal to establish community clinics by the University, which certainly have a tendency to establish medical practice under state control, the one thing to which we are objecting strenuously. Furthermore, the report of the conference does not show that there was any explanation made concerning the reasons for building and equipping hospital facilities at Ann Arbor far beyond the purely teaching needs of the institution. If we are to have community clinics let us confine those clinics to the deserving poor, and let the compensation for the services be in keeping with the ability of the patients to pay, but above everything else we should have those clinics divorced from any kind of federal, state or municipal control with all of the evils attending such bureaucratic management.

IF we can judge by the discussion of the subject in medical societies and medical press it is very evident that the rank and file of the medical profession is awakening to the dangers that threaten the adoption of certain forms of socialized medicine as advocated by would-be reformers and philanthropists. It will be a sorry day for the people as well as the individual members of the medical profession when the practice of medicine is under the control of the State. The results of such a pernicious system are seen in some of the foreign countries where the majority of the people are given inefficient and indifferent care and the individual members of the medical profession are reduced to a position that is economically worse than that of the most ordinary craftsman. This idea of building county or state hospitals in every populous community and opening them to the public free of charge to any and all who may come, or the establishment of community clinics by our state universities or public health boards with the idea of furnishing gratuitous medical and surgical services to the people, sounds rather innocent when presented by some of the uplifters but it is a dangerous proposition. As a matter of fact the people are not suffering for want of skilled attention if they desire to have it, and all of these efforts to improve conditions are sponsored for the most part by members of our profession who are either misguided or have personal ends to gain. It is quite possible that there is a need for more and better medical and surgical attention for the masses, but why discuss plans which in the end will prove detrimental to the medical profession as well as the public? Why not systematize our efforts to give more and better service to the people by greater co-operation among medical men in the various communities.

OUR readers may remember that Cornell University announced a few months ago that it would open a pay clinic. Very naturally, this scheme opened competition with the medical profession. It was bound to result in opposition of the medical profession eventually. Now the Bronx County Medical Society, of New York, at a meeting held on November 16, 1921, unanimously adopted the following resolutions and recommendations:

"RESOLVED: That we protest against the abolition of the Poor Clinic by Cornell University and against the entrance of the University into commercial medicine for a profit.

"That the establishment of Pay Clinics by a University is inimical to the best interests of the public at large and of the medical profession in particular because such Clinics are in direct competition with the physicians who practice in the immediate and remote vicinity.

"That the offer of cooperation by the University with the general practitioner is a blind to beguile the latter to refer cases to them.

"That we condemn the conduct of the physicians who permitted their names and their positions to be used for such crass newspaper publicity as the advance announcements contained.

"That such advertisement is distinctly adverse to the best actions of Medical Men and to the Code of Ethics as established by the American Medical Association.

"That we recognize that these very men will not and cannot offer their services to the patient but will merely act in an advisory capacity far from the clinic rooms.

"That for all the above reasons we recommend that the respective County Societies to which these men belong and under whose jurisdiction Cornell University Medical School exists shall take proper and fitting action to reprimand these men and the University, and furthermore, shall recommend to its members that they not accept positions in a Dispensary that works to the economic detriment of their brethren."

IN evidence of the inconsistency of the average insurance company, we desire to call attention to some interesting correspondence that one of our councillors has engaged in, in an effort to establish the fact that a physician should receive compensation for services rendered an insurance company. In brief the facts are as follows: The insurance company wrote the doctor concerning one of his patients who had applied for insurance as follows: "Before issuing him further insurance we would like to know your opinion of the applicant's health condition, what possible effects you think his injury would have on any future illness, what resistance would he have, and what his health condition is at the present time." To this letter the doctor replied that he charged five dollars for such an opinion and that he would send it upon receipt of check covering the charges. The insurance company came back with the explanation that the answers desired were to secure further information concerning the applicant's physical condition so that proper decision could be made whether the risk was acceptable or not. As indicating how gullible medical men are the company said: "This is the first occasion in doing a nation-wide business that we have received a letter from a physician withholding the information desired until receiving a fee." A very appropriate answer came from the doctor and was as follows:

"I presume that you are in business to earn dividends upon your stock, and when you insure a member you charge him such rate of premium as the experience of your company and others has shown to be adequate to pay his average rate of loss and earn you something for your trouble. That is right and fair.

"I am practicing medicine to maintain myself and family and to accumulate some reserve against old age and disability. I have a fairly accurate knowledge of what it costs me to serve each patient who comes to my office and whom I may visit, and I know what charge is reasonable for the services rendered, and which I must make if I am to maintain myself. In practicing my profession I am selling my services and my knowledge of the human body and the cure of its ailments, and unless I receive money for this service I cannot support myself and my family, pay rents, office girl, drugs, telephone, new equipment, upkeep, etc.

"You write me as follows: 'We would like to know your opinion of the applicant's health condition, what possible effect you think his injury would have on any future illness, what resistance would he have, and what his health condition is at the present time.'

"You are asking me to render you an expert opinion of this applicant's health for the purpose of protecting you in your business, and this opinion you should be willing to pay for and you certainly will pay for it if you or any other insurance company obtain such a statement from me. The fee of five dollars asked of you is certainly a very small one for such a service. The fact that you have found the medical men as a class such easy marks that you can 'work' them and secure their services for nothing to protect you and your business is one of the outstanding facts that go to show the present spineless condition of the majority of my profession. I am pleased to know that I am a forerunner in this matter, and I feel sure that you will find more and more like me as time goes on.

"The applicant about whom you desire an opinion has received value in full for such fees as he has paid for any services I have rendered him, but if the answering of this inquiry were to protect him there might be some reason for me to grant him such courtesy; but I owe you nothing, and I am under no obligation to render you such gratuitous services to protect your company against loss."

To this letter the insurance company replied by "passing the buck" and placing the responsibility upon the applicant in furnishing information concerning physical condition. The company also has the nerve to say that all information concerning the physical condition of the applicant is of value to the applicant only, and that, accordingly, no provision is made for the payment of a medical examination or a medical opinion by the company. The average doctor "falls" for that kind of an argument, even though he knows that it is false. In reality the expert opinion concerning an insurance risk is of economic value to the company inasmuch as it undoubtedly is a means of saving the company from loss. It is a service that has a definite value on a basis of dollars and cents. The insurance company should pay for that service, and the only reason that it doesn't is because of the spineless attitude of the average medical man.

DEATHS

JOHN T. NEWTON, M.D., died at his home in St. Bernice, January 15, at the age of 73 years. Dr. Newton graduated from the Rush Medical College of Chicago in 1879.

EDWIN B. BRIGHAM, M.D., of Indianapolis, died at his home January 18 at the age of sixty-five years. Dr. Brigham was a graduate of the Indianapolis Physio-Medical College.

CYRUS L. WILSON, M.D., died January 18 at his home in Ewing, at the age of 68 years. Dr. Wilson graduated from the Medical Department of the University of Louisville in 1881.

CHARLES L. BOYD, M.D., of Paoli, died January 25 from the effects of paralysis, at the age of 68 years. Dr. Boyd graduated from the Medical College of Indiana, at Indianapolis, in 1881.

FREDERICK L. BUNCH, M.D., died January 10 at his home in Muncie, as a result of an illness caused by injuries received during the war. Dr. Bunch was 36 years of age and graduated from the Bennett Medical College in Chicago in 1907.

J. H. WARREN MEYER, M.D., died at Denver, Colorado, as the result of pneumonia, December 17, 1921, at the age of 38 years. Dr. Meyer was a lieutenant in the United States Navy, Recruiting Forces. He graduated from the Rush Medical College of Chicago in 1907.

SAMUEL C. LORING, M.D., died at his home in Plymouth, January 2, at the age of 62 years. Dr. Loring graduated from the Rush Medical College in Chicago in 1886 and was a member of the Marshall County Medical Society, the Indiana State Medical Association, the American Medical Association and the American College of Surgeons.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in *The Journal of the Indiana State Medical Association*. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. A. E. RHYAN has been made county health officer of Parke County.

DR. CROUCH, of Fillmore, has been made county physician for Putnam County.

THE annual conference of health officers was held in Indianapolis, February 13 to 18.

VITAL statistics for 1921 show 67,850 births and 35,134 deaths in the State of Indiana.

THE Lawrence County Medical Society held its regular meeting January 4, 1922, at Bedford.

DR. HERMANN M. BIGGS has been re-elected president of the American Social Hygiene Association.

DR. E. M. CONRAD has been made health officer of Anderson, Indiana, to succeed Dr. J. A. Long.

THE office of Dr. E. H. Clauser at Muncie was entered Christmas night and a quantity of drugs stolen.

THE Public Health Nursing Association held a meeting in Indianapolis, January 12. Officers were elected.

FORTY-FIVE acres have been added to the gound area of the Sunnyside Sanitorium of Indianapolis.

DR. W. G. WEGNER, of South Bend, has opened new offices in the Farmers Trust Building of that city.

DR. S. G. WHITE, of Warsaw, was injured in an automobile accident, January 10. The injuries were not serious.

DR. and MRS. A. L. WILSON, of Indianapolis, were injured in an automobile accident January 3. Neither was seriously injured.

DRS. FITZPATRICK, COTTON and HOPPENRATH, of Elwood, have been made the new members of the city health board of that city.

THE Randolph County Medical Society held its regular meeting January 9. Dr. Hunt presented a paper on disease of the kidneys.

DR. JOHN A. PFAFF, of Indianapolis, has removed his office from the Bankers Trust Building to Suite 902-3 National City Bank Building.

THE office of Dr. B. F. Dudding, of Hope, Indiana, was broken into and robbed, December 30, of a large amount of opium and morphine.

THE Lake County Medical Society held a meeting January 12 at Gary. Papers were presented by Drs. Ira Miltimore and H. C. Parker.

DR. C. D. LANE, of Ligonier, is remodeling his office. The new office will include an operating room, x-ray room and two detention rooms.

DR. C. F. HOPE has moved from Coatsville to Shoals, Indiana, where he will practice medicine in the office formerly occupied by Dr. H. W. Shirley.

DR. HARRY L. FOREMAN, of Indianapolis, has announced his removal to new offices at 3005 North Illinois Street for the practice of general medicine and obstetrics.

THE Elkhart County Medical Society held a meeting at Goshen, January 5. A paper was presented by Dr. Albert J. Ochsner, of Chicago, on "Osteomyelitis".

THE Muncie Academy of Medicine held a meeting January 20 at the Hotel Roberts. A paper on "Epidemic Jaundice" was presented by Dr. S. C. Waters.

ACCORDING to an announcement made by the Children's Bureau, twenty-two states have accepted the provisions of the Sheppard-Towner Infant and Maternity Law.

THE Wabash County Medical Society held its regular monthly meeting at Wabash, January 20. Papers were presented by Drs. Fred Whistler and L. O. Sholty.

A HOME for nurses in the employ of the Schneck Memorial Hospital at Seymour, Indiana, has been presented by Mrs. Louise Schneck as a memorial to her husband.

THE Putnam County Medical Society held a meeting January 5 and the following officers were elected: Dr. R. H. Richards, president; Dr. C. C. Tucker, secretary-treasurer.

A NEW government hospital will be formally opened at Dawson Springs, Ky., February 22, according to an announcement made by Assistant Secretary of the Treasury Clifford.

THE Physicians' Club met at the St. Joseph's Hospital, Mishawaka, January 18. Dr. A. C. Yoder, of Goshen, presented a paper on "The Present Status of Chronic Gastritis".

DRS. E. E. HODGIN, W. H. FOREMAN, GOETHE LINK and ARTHUR E. GUEDEL have been made members of the new board of health of Indianapolis, recently appointed by Mayor Shank.

DR. D. F. CAMERON has been appointed assistant physician and surgeon for the Pennsylvania Railroad and has established offices in the Medical Arts Building in Fort Wayne.

THE Wells County Medical Society held its first meeting of the year at Bluffton, January 17. Dr. D. D. Jones, of Berne, presented a paper on "The Sympathetic Nervous System".

THE Delaware-Blackford Academy of Medicine held its first meeting of the year at Muncie, January 6. Dr. Robert Prebel addressed the meeting, his subject being "The Logic of Medicine."

THE *Red Cross Courier* will be a new weekly periodical published by the American Red Cross Society which will take the place of all bulletins now published at National and division headquarters.

THE Johnson County Medical Society has elected the following officers for 1922: Dr. J. A. Craig, president; Dr. Luke P. V. Williams, vice-president; Dr. A. T. Records, secretary-treasurer.

PLANS are being made for the erection of a million dollar office building for physicians in Indianapolis. The plans include a small hospital and operating room. The building is to be fifteen stories.

DRS. EDWARD KRUSE and LYMAN RAWLES, of Fort Wayne, have been appointed examining physicians for crippled children seeking treatment at the Shrine hospital now under construction at St. Louis.

PLANS were made for the opening of an office for the county health doctor and nurses, and the formulation of county health plans for this year were discussed for Marion County at a conference held January 5, 1922.

DR. JOSEPH MACDONALD, JR., editor and publisher of the *American Journal of Surgery* and co-publisher of *Medical Pickwick,* died suddenly in his office on January 7 of cerebral hemorrhage at the age of 51 years.

THE monthly meeting of the Clark County Medical Society was held January 3, 1922, and the following officers were elected: Dr. T. J. Marshall, president; Dr. A. H. Mead, vice-president; Dr. Giles E. Mowrer, secretary.

PLANS have been made for the establishment of a hospital for incurable patients who are now in the City Hospital at Indianapolis. More room is needed in the City Hospital for patients who can be restored to normal health.

THE Sullivan County Medical Society held a meeting January 20, 1922, and the following officers were elected: Dr. Paul Higbee, president; Dr. J. R. Crowder, vice-president; Dr. J. S. Brown, secretary-treasurer.

THE Treasury Department has approved the plans for the remodeling of the Bronx Hospital for the treatment of ex-service men. The hospital is to be ready for occupancy by March 15, and will be for the treatment of general cases.

AMERICAN Legion posts of Minnesota will erect a two hundred thousand dollar hospital where Drs. William and Charles Mayo will treat former soldiers of the world war. Patients will be charged according to their ability to pay.

DR. HOWARD B. CROSS, of the Rockefeller Institute of Medical Research, who went to Vera Cruz, Mexico, to study yellow fever, contracted the disease while inspecting sanitary conditions at Tuxtepec, and died at Vera Cruz, December 27.

DR. G. H. ESPINLAUB, of Indianapolis, and a nurse, Miss Villa Corzine, were injured in an automobile accident, January 13, when the ambulance in which they were making an emergency call was struck by a cattle truck. Neither was seriously injured.

THE Boone County Medical Society held its annual meeting Tuesday, January 3, at Lebanon and the following officers were elected: Dr. J. H. Black, president; Dr. John D. Coons, vice-president; Dr. E. H. Hare, secretary-treasurer; Dr. P. B. Little, delegate.

DURING January the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: The Abbott Laboratories, Butyn. G. W. Carnrick Co., Solution Post-Pituitary. Parke, Davis & Co., Pituitrin "O".

THE LaPorte County Medical Society held a meeting January 13, 1922, at Michigan City. A paper was presented by Dr. H. H. Martin on "Review of Gall Bladder and Gall Duct Therapy." The paper was discussed by Drs. E. G. Blinks, N. E. Funk, and J. V. Kerrigan.

DR. B. G. DUPRE has resigned his position of surgical assistant to Dr. H. A. Duemling of the Lutheran Hospital, Fort Wayne, to become surgical man at the Hope-Methodist Hospital of that city. Dr. H. L. Norris will fill the vacancy made by the resignation of Dr. Dupre.

AT a recent meeting of the Board of Regents of the University of Michigan it was voted to merge the homeopathic medical school with the medical school of the University. Last year there were but seven graduates from the homeopathic school and the cost of maintenance was more than $47,000.

WILLIAM C. VANARSDEL, 72 years old, died at his home in Indianapolis, January 8. Mr. VanArsdel was president of the board of trustees of the Methodist Hospital in Indianapolis until prevented from active participation in its affairs when he was made president emeritus of that institution for life.

DIVISIONS of child and infant hygiene and nursing of the State Board of Health were merged into one division at a meeting held in Indianapolis, January 11. The divisions were combined in order to meet the requirements of a Federal law so that an appropriation of $10,000 for the health work may be obtained.

THE Bartholomew County Medical Society held its annual meeting January 10 at Columbus where the following officers were elected: Dr. F. D. Norton, president; Dr. C. M. Jackson, vice-president; Dr. Lyman Overshiner, secretary-treasurer; Dr. George T. MacCoy, delegate, and Dr. O. A. Delong, alternate.

AT a meeting of the state board of medical registration and examination held at Indianapolis, January 12, the following officers were elected: Dr. W. A. Spurgeon, Muncie, president; Dr. E. M. Shanklin, Hammond, vice-president; Dr. W. T. Gott, Crawfordsville, secretary; Dr. Paul Tindall, Shelbyville, treasurer.

AT the Indianapolis session of the Indiana Academy of Ophthalmology and Otolaryngology, January 20, the following officers were elected: Dr. D. O. Kearby, president; Dr. H. C. Knapp, first vice-president; Dr. J. W. Carmack, second vice-president; Dr. B. W. Egan and Dr. M. Ravdin, counselors

FULTON, Delaware and Gibson counties have accepted the proposal of the international health board of the Rockefeller Foundation to provide a public health officer with specialized training for full time service in the county. It is desired to show the superiority of a full-time, specially trained man over the present system in use in this state.

AT a meeting of the Public Health Nursing Association held in Indianapolis, January 12, a resolution was made and passed to set aside $1,200.00 as a foundation fund to be used for carrying on the association work. It is to be known as the Addie Hunt Bryce fund, Mrs. Bryce having been one of the founders of the association.

DRS. GEORGE E. DE SCHWEINITZ, CHARLES W. RICHARDSON, and FRED B. LUND have been appointed as a committee on the Gorgas Memorial. This appointment was made to comply with a request from the Gorgas Memorial Institute of Tropical and Preventive Medicine of Panama for the cooperation of the American Medical Association.

AN independent appropriation bill presented to the lower house of Congress includes administrative expenses of the U. S. Veterans' Bureau. The measure carries $64,658,680 for medical and hospital service. This is an increase of $6,658,680 over the current fiscal year and is in accordance with the recommendation of the budget bureau.

DR. WALTER P. BOWERS has resigned as secretary of the Massachusetts Board of Registration in Medicine which position he has held since 1913, to assume the editorship of the *Boston Medical and Surgical Journal*. This Journal recently has been taken over by the Massachusetts Medical Society and under Dr. Bowers' editorship is undergoing a number of improvements.

COMPETITION is now open to non-members of the American Laryngological Association for the de Roaldes Prize. The prize is a gold medal valued at one hundred fifty dollars and will be presented for the best original thesis on a subject pertaining to laryngology or rhinology. Theses must be in the hands of the chairman of the prize committee, Dr. D. Bryson Delavan, 40 East Forty-first Street before the first of April.

A BILL for the reorganization of the United States Public Health Service has been introduced in the Congress. This bill provides that officers of the reserve corps of the Public Health Service, not to exceed 550, may be transferred to and commissioned in the regular corps of the service. The office of Surgeon General shall

be filled by appointment by the President for a term of four years. It also provides that there shall be a corps of nurses, dietitians, and reconstruction aides in the United States Public Health Service.

ACCORDING to an announcement, $1,320,000 has been appropriated for the erection of a new medical building at Yale University to be known as the Sterling Hall of Medicine. The building will contain a medical library of approximately twelve thousand volumes, an amphitheater with seating capacity of two hundred fifty, administrative offices of the dean and registrar, faculty room, students' common room, and single rooms for unmarried instructors in the preclinical subjects. A wing will provide laboratories on the first and second floors.

THE Adjutant-General has submitted a proposed legislation to Congress which establishes a definite law covering promotions in the Medical Corps of the Army. This legislation provides that an officer in the Medical Corps shall be promoted to the grade of captain after three years' service, to that of major after twelve years' service, to lieutenant-colonel after twenty years' service, and to the grade of colonel after twenty-six years' service. The purpose in this legislation is to increase the efficiency of the medical department of the Army.

ROBERT BURDINE, leper, who was discovered in Indianapolis, with anesthetic leprosy about two years ago, was placed under quarantine by the State Board of Health and treated with ethyl ester of Chaulmoogra oil. The Board has now pronounced him cured and discharged the quarantine. The most careful search does not find in the nose or elsewhere the lepra bacillus which at the beginning of the treatment was easily discovered, every slide showing the organism. The State Board of Health is compelled to assume that this leper is cured because there is no evidence that he has the disease and the law therefore cannot hold him.

THE United States Civil Service Commission announces that there is urgent need for reconstruction assistants and aides in physiotherapy and occupational therapy, trained nurses and physicians, to serve in hospitals and other establishments of the United States Public Health Service. Applications for these positions will be received by the Commission until further notice. Applicants will be rated upon their education, training, experience, and physical ability. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or from the Secretary of the Local Board of Civil Service Examiners at the postoffice or customs house in any city.

THE U. S. Public Health Service announces a Venereal Disease Institute to be held under the direction of the Illinois State Department of Public Health at the Congress Hotel in Chicago, March 13-18, inclusive. Courses in syphilis, gonorrhea, the problem of prostitution and delinquency, clinics and their management, clinic social work and methods of health education will be given. Special features will include daily noon-day luncheons and evening clinics.

An invitation is extended to all physicians and especially those who are particularly interested in venereal diseases. Those who plan to attend are urged to register at once. Registration cards and programs may be obtained upon request from Dr. I. D. Rawlings, Director of Public Health, Springfield, Illinois.

A COURSE on Current Problems of Biochemistry and Experimental Medicine is offered by the Indiana University School of Medicine, the first lecture being delivered Wednesday, February 15, 1922, at 8:00 P. M. The course is conducted by Professor B. B. Turner and consists of eight lectures to be given on alternate Wednesday evenings at the Indiana University School of Medicine, Indianapolis. The second lecture will be given Wednesday, March 1, at 8:00 P. M.

The subjects discussed will include nutrition, intermediate metabolism of food substances, vitamines, basal metabolism, endocrine glands, kidney function and nephritis, acidosis, relation of chemical constitution to physiological action. The fee for the course will be $5.00.

For further particulars address Registrar, Indiana University School of Medicine, Indianapolis, Indiana.

One of the most important developments in the medical history of the past five years has been the work of the Council on Pharmacy and Chemistry, of the American Medical Association. Their examination and analysis of newer remedies has done much to advance the standard of manufacturing pharmacy; it is safeguarding the doctor against inferior products, and indicating those for which misleading claims are made.

The cooperation of the doctor in using and prescribing Council-Passed products is making this work more effective each year. The cooperation of the manufacturers is, also, an encouraging recognition of the value of this service. A partial list of the Council-Passed Remedies, manufactured by The Abbott Laboratories, Chicago, appears in this issue. These are obtainable on prescription at the leading pharmacies, or may be obtained direct, as desired.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District Councilor	Number of Counties	1921 Membership	1922 Membership to Date	Percentage
First—Dr. Willis	7	176	136	.77
Second—Dr. Schmadel	7	149	108	.72
Third—Dr. Leach	9	130	88	.67
Fourth—Dr. Osterman	10	138	127	.92
Fifth—Dr. Weinstein	5	158	118	.88
Sixth—Dr. Spilman	8	150	111	.74
Seventh—Dr. Earp	4	425	308	.73
Eighth—Dr. Conrad	5	172	68	.39
Ninth—Dr. Moffitt	10	253	210	.83
Tenth—Dr. Shanklin	5	151	97	.64
Eleventh—Dr. Black	6	191	170	.89
Twelfth—Dr. Morgan	8	241	194	.80
Thirteenth—Dr. Berteling	8	274	241	.88
	92	2608	1976	

THE COUNCIL

The regular mid-winter meeting of the Council of the Indiana State Medical Association was held in the Assembly Room at the Board of Trade Building, Indianapolis, Tuesday, January 10, 1922.

At 12.30 p. m. the Councilors were guests of President Davidson at luncheon after which the meeting convened with the following present: Drs. W. R. Davidson, E. M. Shanklin, E. M. Conrad, Joseph Schmadel, C. S. Black, J. H. Weinstein, E. E. Morgan, F. J. Spilman, Walter Leach, S. E. Earp, A. G. Osterman, W. R. Moffitt, and C. N. Combs.

The Chairman, Dr. Shanklin, presided. The minutes of the previous meeting were read and approved.

Dr. E. M. Shanklin was re-elected as Chairman of the Council for the year 1922.

Dr. A. E. Bulson, Jr., Editor of THE JOURNAL, was absent and no report was made.

The Councilors made their respective district reports. The Fourth District has had the best year of its existence. The Eleventh District at its district meeting voted to ask the Council to recommend changing Howard County from the Ninth District to the Eleventh District.

Dr. Black moved that the Council endorse the transfer of Howard County from the Ninth to the Eleventh District, and refer the proposal to the House of Delegates for final action.

Seconded by Dr. Moffitt.

Motion carried.

The Twelfth District Councilor has been furnishing programs for the weaker county societies, and finds that this plan is of great assistance to them. He recommends it to other district councilors.

The Council went into executive session and considered the case of Dr. J. Sater Nixon, Kokomo, versus the Howard County Medical Society. The Council unanimously voted to sustain the action of the Howard County Medical Society in expelling Dr. Nixon.

Adjourned.

CHARLES N. COMBS, Secretary.

SECRETARY'S REPORT

TO THE COUNCIL:

One year ago I ventured the prediction that we would be able to increase our membership in 1921, and it is now very gratifying to be able to report that such is the case.

Membership Jan. 1, 1921		2513
Died	28	
Left State, retired, etc	31	
Delinquent	114	173
		2340
New members		268
Membership Jan. 1, 1922		2608

In the past years, I have endeavored to stimulate rivalry between the county secretaries for the purpose of increasing the membership. This year I am taking the territory of the different councilors, and will publish the 1921 membership from each councilor district. Each month in THE JOURNAL, there will be published the 1922 membership to date for each of these districts with a percentage column for the purpose of comparison. Each councilor will be expected to be responsible for the membership of every eligible physician in his territory, and should have at the end of the year not less than a 100% enrollment.

Respectfully submitted,
CHARLES N. COMBS, Secretary.

TREASURER'S REPORT FOR THE YEAR 1921

GENERAL FUND

Balance on hand January 1, 1921		$ 7,028.40
Membership dues at $4.00 per member (2608 members)		10,428.00
(One member in service and dues remitted)		
Indianapolis Exhibitors		559.99
Total		$18,016.39

DISBURSEMENTS

Journal Subscriptions, $2.00 per member	$ 5,216.00	
Secretary-Treasurer, stenographer	858.00	
" " honorarium	500.00	
" " postage and supplies	111.72	
Legislative Committee	948.89	
Other Committees	28.00	
Councilors	72.11	
Printing	311.00	
Storage	66.00	
Indianapolis Session	887.81	
Rental	$308.96	
Stenographic Report	362.10	
Programs	67.50	
Registration Clerks	20.00	
Badges	39.75	
Stereopticon	10.00	
Guest	79.50	
Total Disbursements		$ 8,999.53
Balance on hand January 1, 1922		$ 9,016.86

MEDICAL DEFENSE FUND

RECEIPTS:		
Cash on hand January 1, 1921		$ 1,526.21
Liberty Bonds January 1, 1921		5,000.00
Interest		212.50
Nothing received from General Fund on account of amount on hand being over $6,000.00.		
		$ 6,738.71
DISBURSEMENTS:		
Printing	$ 22.30	
Attorney fees	1,128.50	1,150.80
Balance on hand January 1, 1922		$ 5,587.91
Cash	$ 587.91	
Liberty Bonds	5,000.00	

Respectfully submitted,
CHARLES N. COMBS, Treasurer.

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

NUFORAL.—This is a preparation advocated for the treatment of tuberculosis by the Nuforal Laboratories, New York. From the available evidence it appears evident that the use of Nuforal as a treatment for tuberculosis is a commercial proposition, and that the treatment is distinctly in the experimental stage. —(*Jour. A. M. A.*, Jan. 7, 1922, p. 59).

HELIOTHERAPY AND RICKETS.—Evidence for the value of heliotherapy in rickets was presented years ago. This value has recently been verified by experiments on animals rendered demonstrably rachitic through dietary errors. When rats have an abundance of sunlight, they remain healthy under regimens which are sufficiently deficient in phosphorus to induce rickets in animals kept in subdued light. It has been shown that the changes produced by

sunlight on the skeleton do not differ in any important respect from the changes produced when animals are fed cod liver oil. Again, sun treatment of infants suffering from rickets not only brings about a cure of the rachitic lesions, but in so doing occasions chemical changes in the blood similar to those noted when the cure is effected by cod liver oil. Heliotherapy has thus in one case at least been put upon the scientific basis of demonstrable chemical changes in the organism affected.—(*Jour. A. M. A.*, Jan. 21, 1922, p. 195).

WESTERN MEDICAL ASSOCIATION TREATMENT FOR EPILEPSY.—The Western Medical Association, Chicago, is selling a mail-order treatment for the alleged cure of epilepsy. The A. M. A. Chemical Laboratory examined the "Treatment" and found the essential constituent to be phenobarbital (luminal). The Laboratory reports that the "Treatment" is sold in three boxes, A. B. and C. "A" contained tablets, each of which represented 0.66 gm. (1 grain) of phenobarbital (luminal). "B" contained tablets which are of the type sold by pharmaceutical houses as "digestive tablets" and contained pepsin, pancreatin and calcium lactophosphate. "C" contained tablets which gave tests for emodin-bearing drugs and for aloin. In addition to the epilepsy treatment, the Western Medical Association also sells a number of other nostrums for the treatment of various diseases. Apparently, two men are mainly concerned in operating the Western Medical Association, namely, Joseph B. Creevy and Dr. W. W. Lister, a physician.—(*Jour. A. M. A.*, Jan. 28, 1922, p. 296).

ANTIDOTE FOR PHENOL POISONING.—Sodium sulphate in strong solution is one of the best known antidotes for phenol poisoning. The action is not a chemical one. Alcohol is not an antidote for phenol poisoning. Experiments carried out in the U. S. Hygienic Laboratory showed that the toxicity of phenol was increased by alcohol. Alcohol is applied to the appendix stump after operation in the belief that it will neutralize the action of the phenol and thus prevent extensive sloughing of the tissues; but no doubt the action of the alcohol is simply that of diluting and washing away the phenol.—(*Jour. A. M. A.*, Jan. 28, 1922, p. 299).

PINUSEPTOL.—According to the catalog of Eli Lilly & Company, Pinuseptol is a "Pine Oil Disinfectant". The Bureau of Chemistry of the U. S. Department of Agriculture has investigated the general subject of the use of pine oil as a disinfectant. It reports that emulsions made from pine oil when freshly prepared give a Hygienic Laboratory phenol coefficient of from 3.42 to 4.34. It was found that pine oil emulsions failed to kill M. aureus and B. anthracis; and the government chemists conclude that these products should not be used for general disinfecting purposes.—(*Jour. A. M. A.*, Jan. 28, 1922, p. 299).

NEW AND NONOFFICIAL REMEDIES

LIQUID PETROLATUM-SQUIBB, HEAVY (CALIFORNIA).—A brand of liquid petrolatum-U. S. P., made from California petroleum and claimed to be composed essentially of hydrocarbons of the naphthene series. For a description of liquid petrolatum, see the U. S. Pharmacopeia and Useful Drugs. E. R. Squibb & Sons, New York.

CHAULMOOGRA DERIVATIVES.—Chaulmoogra oil is a fixed (fatty) oil. In addition to small quantities of the glycerides commonly found in fats, chaulmoogra oil contains the glycerides of a series of highly unsaturated fatty acids, chiefly chaulmoogric acid and hydrocarpic acid. The therapeutic properties of chaulmoogra oil appear to be due to these unsaturated fatty acids. Chaulmoogra oil is used in the treatment of leprosy, the bulk of the evidence indicating that it is of value though it does not have specific curative properties. Chaulmoogra oil is given by mouth or hypodermic injection. The sodium salts of the fatty acids of chaulmoogra oil and the ethyl esters prepared from these fatty acids have been used in the treatment of leprosy with claims that they are better tolerated than the oil.

CHAULMOOGRA OIL.—OLEUM CHAULMOOGRAE.—For actions and uses, see the preceding article, "Chaulmoogra Derivatives". The dose is 0.3 Cc. (5 drops) in capsules, three times daily, the dose being increased to the point of tolerance. For hypodermic injection it has been used mixed with olive oil.

CHAULMESTROL.—Ethyl esters of the fatty acids of chaulmoogra oil. For a discussion of the actions and uses, see the preceding article, "Chaulmoogra Derivatives". Orally, chaulmestrol is administered in gradually increasing doses of from 1 Cc. to 5 Cc. Intramuscularly, 1 Cc. is the initial dose. The Bayer Company, New York (Winthrop Chemical Company, Inc., New York, distributor).—(*Jour. A. M. A.*, Jan. 14, 1922, p. 111).

FOOD ALLERGENS-SQUIBB.—Powders representing the protein of foods. For action, uses and dosage, see general article, "Biologically Reactive Food Proteins", New and Nonofficial Remedies, 1921, p. 65. The following allergens have been accepted: Almond Allergen-Squibb, Barley Allergen-Squibb, Brazil-Nut Allergen-Squibb, Buckwheat Allergen-Squibb, Butternut Allergen-Squibb, Chestnut Allergen-Squibb, Corn Allergen-Squibb, Filbert Allergen-Squibb, Hazelnut Allergen-Squibb, Hickory-Nut Allergen-Squibb, Oat Allergen-Squibb, Peanut Allergen-Squibb, Pecan Allergen-Squibb, Rice Allergen-Squibb, Rye Allergen-Squibb, Walnut (Black) Allergen-Squibb, Walnut (English) Allergen-Squibb, Wheat Allergen-Squibb, Apple Allergen-Squibb, Artichoke Allergen-Squibb, Asparagus Allergen-Squibb, Banana Allergen-Squibb, Blackberry Allergen-Squibb, Black Pepper Allergen-Squibb, Bean (Lima) Allergen-Squibb, Bean (Navy) Allergen-Squibb, Bean (String) Allergen-Squibb, Beet Allergen-Squibb, Cabbage Allergen-Squibb, Cantaloupe Allergen-Squibb, Carrot Allergen-Squibb, Celery Allergen-Squibb, Cherry Allergen-Squibb, Coffee Allergen-Squibb, Cucumber Allergen-Squibb, Eggplant Allergen-Squibb, Grape Allergen-Squibb, Grapefruit Allergen-Squibb, Lettuce Allergen-Squibb, Mustard Allergen-Squibb, Onion Allergen-Squibb, Orange Allergen-Squibb, Parsnip Allergen-Squibb, Pea Allergen-Squibb, Peach Allergen-Squibb, Pear Allergen-Squibb, Plum Allergen-Squibb, Potato (Sweet) Allergen-Squibb, Potato (White) Allergen-Squibb, Prune Allergen-Squibb, Radish Allergen-Squibb, Raspberry Allergen-Squibb, Rhubarb Allergen-Squibb, Spinach Allergen-Squibb, Squash Allergen-Squibb, Strawberry Allergen-Squibb, Tomato Allergen-Squibb, Turnip Allergen-Squibb, Watermelon Allergen-Squibb, Beef Allergen-Squibb, Bluefish Allergen-Squibb, Chicken Allergen-Squibb, Clam Allergen-Squibb, Codfish Allergen-Squibb, Crab Allergen-Squibb, Goose Allergen-Squibb, Haddock Allergen-Squibb, Halibut Allergen-Squibb, Horse Allergen-Squibb, Lamb Allergen-Squibb, Lobster Allergen-Squibb, Mackerel Allergen-Squibb, Mutton Allergen-Squibb, Oyster Allergen-Squibb, Pork Allergen-Squibb, Salmon Allergen-Squibb, Shrimp Allergen-Squibb, Sweetbreads Allergen-Squibb, Turkey Allergen-Squibb, Veal Allergen-Squibb, Milk (Cow) (All Proteins) Allergen-Squibb, Milk (Goat) (All Proteins) Allergen-Squibb, Milk (Human) (All Proteins) Allergen-Squibb, Milk (Cow) (Casein) Allergen-Squibb, Milk (Cow) (Albumin) Allergen-Squibb, Egg (White) (All Proteins) Allergen-Squibb, Egg (Yolk) (All Proteins) Allergen-Squibb, Egg White Albumin Allergen-Squibb, Egg (Whole) (All Proteins) Allergen-Squibb, Wheat

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(Gliadin) Allergen-Squibb, Orris Root Allergen-Squibb. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Jan. 21, 1922, p. 192).

POLLEN PROTEIN ALLERGENS-SQUIBB.—Powders consisting of the sodium chloride-soluble protein of the isolated pollen from various species of plants. The Pollen Protein Allergens-Squibb are intended only for diagnosis. For action, uses and dosage, see general article, "Pollen Extract Preparations", New and Nonofficial Remedies 1921, page 239. The following allergens have been accepted: Corn Pollen Allergen-Squibb, Goldenrod Pollen Allergen-Squibb, Orchard Grass Pollen Allergen-Squibb, Ragweed Pollen Allergen-Squibb, Rye Pollen Allergen-Squibb, Timothy Pollen Allergen-Squibb. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Jan. 21, 1922, p. 193).

NEOCINCHOPHEN-ABBOTT.—A brand of neocinchophen-N. N. R. For action, uses and dosage, see New and Nonofficial Remedies 1921, p. 86. The Abbott Laboratories, Chicago.—(*Jour. A. M. A.*, Jan. 21, 1922, p. 192).

BOOK REVIEWS

ARTERIOSCLEROSIS AND HYPERTENSION WITH CHAPTERS ON BLOOD PRESSURE. By Louis M. Warfield, A.B., M.D. (Johns Hopkins), F.A.C.P.; formerly Professor of Clinical Medicine, Marquette University Medical School; Chief Physician to Milwaukee County Hospital; Associate Member Association American Physicians; Member American Association Pathologists and Bacteriologists; American Medical Association, etc., Fellow American College of Surgeons. Third Edition. Cloth, pp. 265. Price $4.00. Published by C. V. Mosby Company, St. Louis.

For a condensed volume on this important subject, it would be difficult indeed to find a more satisfactory digest of facts than obtains in this new edition of Dr Warfield's admirable book. Arteriosclerosis is here considered not so much as a disease with a definite etiologic factor as it is a degenerative process affecting the vascular system, following a variety of causes, the most characteristic causal factor being lues.

Much has been added to the chapter on blood pressure and the section on cardiac irregularities is both new and satisfying.

The subject of treatment alone is sufficiently comprehensive, yet withal terse, that it alone should win a place for the volume in the library of anyone interested in the subject of cardio-vascular diseases.

EPHRAIM MCDOWELL—"FATHER OF OVARIOTOMY" AND FOUNDER OF ABDOMINAL SURGERY—with an appendix on JANE TODD CRAWFORD. By August Schachner, M.D., F.A.C.S., Louisville, Kentucky. Octavo volume of about 350 pages. Attractively printed and profusely illustrated with plates in double tone. Price $5.00. J. B. Lippincott Company, Publishers. Philadelphia and London.

The author has given us an excellent history of the life and work of Ephraim McDowell. He has also given us the first history of Jane Todd Crawford —the woman who made McDowell's first ovariotomy a possibility.

McDowell's life story has been too long neglected and it behooves every American surgeon to read this book by Schachner. We can justly claim that McDowell is, in a sense, the Father of Abdominal Surgery. As the author states he "emphasized the possibility of invading the peritoneal cavity" and thus "he laid the cornerstone for the most brilliant domain of surgery".

Schachner maintains that had McDowell lived under the shadow of a great university he would never have been the first ovariotomist. "It was McDowell's frontier location on the very fringe of civilization, where freedom and self reliance reigned supreme, that made the first ovariotomy possible."

The Reviewer was rather saddened to learn that the generally accepted story, that an angry mob surrounded the house and threatened McDowell's life while he performed his first operation, is purely a myth. Of course, at the time of the operation, there was considerable excitement in the village of Danville and "a preacher from the pulpit called attention to the fact that Dr. McDowell was attempting an impossible thing, and in the event of the woman's death he would be a murderer".

Good taste and modesty should have dictated the exclusion of the foot-note on page 39 wherein the author, by indirection, compares himself to John Bell of Edinburgh.

ESSAYS ON SURGICAL SUBJECTS. By Sir Berkeley Moynihan, K.C.M.G., C.B., Leeds, England. Octavo of 253 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $5.00 net.

This charming book is a collection of addresses, lectures, and essays that have been published at various times during the last few years. The author dedicates the volume "To Dr. W. H. Mayo, Dr. C. H. Mayo and my friends at the Mayo Clinic. A small acknowledgment of a great debt." The first essay is the well known Murphy Memorial Oration which is already familiar to many American readers. The second essay is entitled "The ritual of a surgical operation" and it should be read by every surgeon. Most of us will readily admit the truth of the statement that "every operation in surgery is an experiment in bacteriology". There follow essays on "The Diagnosis and Treatment of Chronic Gastric Ulcer", "Disappointments After Gastro-enterostomy", "Intestinal Stasis", "Acute Emergencies of Abdominal Disease", "The Gifts of Surgery to Medicine", "The Surgery of the Chest in Relation to Retained Projectiles" and "The Most Gentle Profession". Probably the most interesting of these essays is the one entitled "The Gifts of Surgery to Medicine" which was the annual address in surgery delivered before the British Medical Association. It is obvious that Moynihan is an admirer of American medical men.

VICE AND HEALTH. PROBLEMS—SOLUTIONS. By John Clarence Funk, Director Bureau of Protective Measures, Pennsylvania State Department of Health, Scientific Assistant U. S. Public Health Service. Philadelphia and London: J. B. Lippincott Company. Price $1.50.

This book of 174 pages is dedicated to the League of Woman Voters. It has a yellowish-green cover with the legend, in red, "How to Put the Red Light Out". The book may be described by the stock phrase, "Well written". It deals with the different aspects of prostitution, but develops no new theories. It should most certainly be read by those to whom the author has directed his appeal.

Medical Lib.

THE JOURNAL
OF THE
Indiana State Medical Association

Owned, Published and Controlled by the Indiana State Medical Association

ISSUED MONTHLY under the Direction of the Council

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Next Annual Session, Muncie, September 27, 28, 29, 1922. List of Officers and Committees on Adv. Page 2. Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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Next Annual Session, Muncie, September 27, 28 and 29, 1922

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DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

For one year (term expires December 31, 1922): Joseph Rilus Eastman, Indianapolis. Alternate, M. R. Combs, Terre Haute.

For two years (term expires December 31, 1923): Albert E. Bulson, Jr., Fort Wayne; George F. Keiper, Lafayette Alternates, E. H. Griswold, Peru; Harry Elliott, Brazil.

COUNCILORS

Chairman—E. M. Shanklin, Hammond.

District	Term Expires	District	Term Expires
1st—J. H. Willis, Evansville	Dec. 31, 1923	7th—S. E. Earp, Indianapolis	Dec. 31, 1923
2d—Joseph Schmadel, Vincennes	Dec. 31, 1924	8th—E. M. Conrad, Anderson	Dec. 31, 1924
3d—Walter Leach, New Albany	Dec. 31, 1922	9th—William R. Moffit, Lafayette	Dec. 31, 1923
4th—A. G. Osterman, Seymour	Dec. 31, 1923	10th—E. M. Shanklin, Hammond	Dec. 31, 1923
5th—Joseph H. Weinstein, Terre Haute	Dec. 31, 1924	11th—C. S. Black, Warren	Dec. 31, 1924
6th—Frank J. Spilman, Connersville	Dec. 31, 1922	12th—E. E. Morgan, Fort Wayne	Dec. 31, 1922
		13th—J. B. Berteling, South Bend	Dec. 31, 1923

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INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY under Direction of the Council ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV MARCH 15, 1922 NUMBER 3

ORIGINAL ARTICLES

FUNCTIONAL DISEASES OF THE NERVOUS SYSTEM IN SOLDIERS AND CIVILIANS.*

CHAS. G. BEALL, M.D.
FORT WAYNE, INDIANA

It has been maintained that there is no such thing as a pure "neurosis", that there is always an organic or chemical change in the body giving rise to all signs and symptoms. The present tendency is to explain many symptoms, and symptom complexes, on the ground of disturbances of the function of the glands of internal secretion. We must not be conceited enough to believe that our present age originated this attractive theory, as the Greeks many centuries ago believed that the uterus had much to do with a certain functional nervous disease. In fact the name of this organ is given to the disease—hysteria. Another modern explanation for what many of us are wont to call functional nervous diseases is that they are dependent on disturbances of the sympathetic nervous system, of which we probably know less than of the glands of internal secretion. I do not mean to belittle these theories, because they stimulate much work, both experimental and clinical. Focal infections have likewise come in for their share of blame, and at times very properly, but many teeth and tonsils have been sacrificed needlessly, and subsequent events have proven that I have been the high executioner in not a few instances. At this point permit me to digress for a moment and call your attention to the fact that early in the lives of some of us the text books grouped together under the title of "functional nervous diseases", what to us are strange bedfellows. The older classifications included diseases which we no longer regard as functional, and there was a distinct tendency to group cases under the predominating symptom or the organ which apparently gave rise to the subjective symptoms. As an illustration of this I quote the following chapter heads from "Functional Nervous Disorders" by C. J. Jones, 1870: Tetanus; Chorea; Puerperal Convulsions; Acustic Neuroses; Pulsation of the Abdominal Aorta; Uterine Neuroses.

Bacteriology has removed some from this classification, a better knowledge of the function of the glands of internal secretion has removed another, and chemistry has removed another. The modern conceptions and present experimental methods may, and undoubtedly will, remove others. I take it that the modern conception of a functional nervous disease is one in which certain, usually subjective, sensations are present, for which, after a very thorough examination, no definite explanation can be offered.

In the last seven hundred cases examined in my office, approximately one out of seven cases came under this general heading, the various types being as follows:

Pseudocyesis, 0.1%; intestinal neurosis, 1.7%; neurasthenia, 1.5%; neurosis (not defined, including anxiety neuroses, traumatic neuroses spasmodic tic), 8.4%; hypochondriasis, 0.87%; psychasthenia, 0.28%; hysteria, 1.4%. This proportion of cases is probably rather high for the reason that I see most of the ex-soldiers in our district who have functional or organic nervous diseases. It may be said that some, or possibly all, of these cases have some undiscovered organic basis, but each one received a thorough study and the diagnosis was not made when any evidence of organic disease was found.

The importance of using every means of excluding organic disease cannot be too strongly emphasized. This must include a careful history, a thorough and complete physical examination, and such modern laboratory examinations as are indicated. A brief review of the predisposing factors may not be out of place. Heredity, no doubt, plays an important part. How often do we find in the family history that the father or mother was "very nervous", but on the other hand, histories of definite psychoses in the parents is rather rare. Probably the chief, predisposing factor is a recent acute infectious disease. How often do we hear "ever since I had the 'flu'," "flu" of course

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covering a multiplicity of acute infections. Trauma, both physical and mental, is the starting point in many cases. The physical traumas, of course, play a great part as an etiological factor in soldiers for two reasons; first, the unusual nature of the trauma; and, second, the individual was probably exhausted physically, and also under great mental strain when the trauma occurred. It is a rather prevalent opinion that soldiers suffer from altogether different types of functional nervous disorders than civilians, but such has not been my experience, with one exception, and that is the extreme type of traumatic neurosis. Physical traumas occurring in civilian life can produce the same effects, even when they are non-litigation injuries. Surgical operations are a not uncommon source of this type. Of course, an ill advised operation on an already neurotic individual is sure to lead to disaster, but, at times, we see neuroses following imperative surgical procedures. Of the psychic traumas, deaths of near and dear relatives and prolonged mental strains are frequent predisposing factors. I believe that lack of variation in work has to do with producing neuroses in males of keen mentality in a vast majority of cases. We have Freud to thank for presenting to us, forcibly, the part that repressed wishes and desires have in inducing subjective sensations. I want to preceed what I next say with the emphatic statement that true malingering has been exceedingly rare in my experience, but the subconscious knowledge in either soldier or civilian that disease or injury is compensable is a factor in bringing a latent neurosis to full life and maintaining it. One more factor must be spoken of, and it is of great importance because it is preventable. I refer to suggestion. It not infrequently happens that a young male will become conscious of an extra systole, or a few forcible heart beats. He goes to a physician for advice, and because the nature of the subjective sensation is not understood, or because there is a soft systolic murmur, the patient is told he has heart disease and a neurosis is established which may take a year or longer to recover from. Gastro-intestinal symptoms dependent on constipation, faulty habits of eating, or lack of exercise may arouse the suspicion of cancer or ulcer, and if the patient receives a hint of this, the uncertainty and doubt which is established upsets the balance wheel.

Obviously to establish the diagnosis of a functional nervous disease means a thorough study of the case. The doctor who has probably watched the individual develop from childhood, knows his family life, and has cared for his or her parents, has a better insight into the predisposing factors than anyone else. As the diagnosis is based largely on exclusion, only general statement can be made in regard to methods. Brown-Sequared, in his lectures on "Functional Nervous Affections" published in 1868, states that the distinguishing characteristics of a functional nervous affection are "great variability in the intensity of the symptoms, and regular or irregular attacks, with intervals of almost perfect health between these attacks." The minor stigmata of hysteria such as conjunctival anaesthesia, loss of pharyngeal reflex, areas of anesthesia, or contraction or inversion of the color fields are not infrequently encountered. The effort test, i.e., noting the pulse rate at rest, after fifty hops, and after two minutes' rest, will differentiate a neurocirculatory asthenia, but it may require a determination of the basal metabolism to differentiate this from a hyperthyroidism. Rapid exhaustion, following physical or mental effort in an individual who looks well, is suggestive.

The first step in the treatment of functional nervous diseases is the establishment of a definite diagnosis, and where this is done the confidence of the patient has been gained and then the condition should be explained in the simplest of terms and confident assurance that a cure can be obtained. The details of treatment will follow three general lines, the moral, physical and last, and least, medication. A definite congenial occupation is a prime necessity, and even an uncongenial occupation may be made more acceptable by varying it with intervals of a change of work. Only in exceptional cases is it advisable to have the individual stop work, and when this is necessary it should not be for prolonged periods and this applies especially to soldiers. For instance, the office man may be induced to become an amateur farmer or florist out of hours, or the mechanic may be induced to take up a correspondence course. In the case of a woman the problem is a more difficult one, and often taxes the ingenuity of the physican to the utmost. While for the well-to-do patient, hydrotherapy in well appointed establishments is available, yet much benefit can be derived from the more simple home hydrotherapy. Warm and cold sponge baths and salt baths followed by vigorous rubs can be taken in any home. The exercise and increase of moral tone induced by competitive and semi-competitive games are of immense benefit. Stated rest periods for women "whose work is never done" are of as much importance as the outdoor exercise for the "desk" man. In the gastro-intestinal neuroses an abdominal support, whether it corrects a visceroptosis or has some other obscure influence is weil worth trying. Of dietery modifications I will mention but two, because of their importance. First, an effort should be made to increase the underweight individual, and, second, it is ten times

better to correct the frequently co-existing constipation by diet than by drugs, though these may be temporarily necessary. A list of drugs used in the treatment of functional nervous diseases would include almost the entire pharmacopeia, and the list is being added to each year. A few non-narcotic nerve sedatives have stood the test of time, and of these the bromides are probably the most important. In this connection it is well to remember that most potassium salts are more toxic and depressant than the salts of other metals, and had best be avoided. Our forefathers found out emperically that belladonna was of benefit in certain nervous disorders. We now have possibly more rational grounds for its use, as Eppinger and Hess have apparently shown that certain so-called "nervous individuals" suffer from a sensitization or hyperexcitability of the vagotonic system, and atropine lessens this excitability. I hesitate to say anything about glandular therapy because I have been unable to clearly establish in my mind the indications for their use, in spite of rather close study of current literature and a good deal of experimental administration. To be perfectly frank, I recall but one case in which the results were highly satisfactory, and I am unable to explain the rationale in this case. Fortunately, with the exception of thyroid substance, none of them so far as I know do harm, so clinical experimentation is safe. In these clinical experiments, in order that they may be of real value, the various gland substances had best be used singly or at most in combinations of not more than two.

In conclusion it can be said that for the successful treatment of functional nervous disorders the physician must have a broad knowledge of clinical medicine, much patience, and a good fund of common sense.

DISCUSSION

DR. W. D. ASBURY (Terre Haute): I have been trying to make a study of these functional cases, and it is very difficult to satisfy one's self about some of these things. Just recently I had a case that I had occasion to go over, since Dr. Beall asked me to discuss this paper, in which I had to make a diagnosis of neurasthenia. I went back and tried to work out that case better because I always hesitate to make such a diagnosis. This case is a pulmonary tuberculosis with the so-called functional syndrome.

I would insist that we, as medical men, especially those of us that are trying to do internal medicine, have our patients strip and go over them thoroughly so that we may hear every sound of the lungs, and we should spend at least an hour on such patients. I think we cannot properly examine a patient in less time than that. It may be that in some of these functional cases we may not be able to find anything definite, as in the cases Dr. Beall has mentioned. I do think that in these psychic and mental types there is something, somewhere back in their lives, consciously or subconsciously, which is responsible for the present symptoms. If we could go back and find the little thing, the repressed wish or desire that eventually creeps out and produces all these symptoms; and if we were astute enough to analyze it and bring it out, we might be able to help some of these patients. By knowing their mental qualities we might be able to get rid of some of the unsatisfactory diagnoses which we are forced to make.

In regard to treatment, the best thing is to take the individual out of his environment and let him become so interested in something which he wants to do that there will be no time to think of himself, and thus he may develop vision and mental stamina enough to go through life without great handicap.

DR. CHARLES D. HUMES (Indianapolis): Shortly after my return from France, I published a very short paper covering several thousand cases of "shell shock" under the title of psycho-neurosis, manifesting psychoses, paraplegia, monoplegia, mutism, deafness, hysterical contractures, etc.,—one big classification. I thought it was easy to cure them, as conditions existed in France. Out of Chateau Thierry we received eight hundred men who could not walk or talk, who had tremors and all that. Within two weeks all but fourteen of them were back in the line *being shot at for eighty cents a day.* How did we do it? We talked to the men and got to know them, know where they came from, and so on, following the motto of "Get your man,"—know where he comes from, get his confidence, find out what happened—was he blown into the air, did he sleep in the mud for a couple of hours before he was found, did he nearly drown in a concealed shell hole—get his story from him. Then you become acquainted with his experience, and as he unfolds, you carefully replace the unpleasant part with a satisfactory explanation, which has for its purpose *making the cure a mentally painless* one.

There is a particular type of functional disorder which has an organic manifestation, described by Babinski. I could not believe that a man could have a functional disorder with organic manifestations until I saw a soldier diagnosed Raynaud's disease, with his arm utterly helpless in a sling. *With the stage all set,* we examined this man who could not move his right arm, and I suddenly saw in moving his left arm that function had returned in the right. Then I began treatment, talked to him and told him anything I thought would help—I believe you are justified in telling a patient

anything if you are honest—so I told that patient of the cures of others and had him recovering, using his arm and hand slightly, when one day an officer (regular) came through the ward and roughly said: "How many malingerers have you got in here?" Back came the swelling in the boy's arm and today he is in the government hospital with all those original symptoms. That is purely an arrest of the voluntary cerebral center manifesting loss of motor function with profound vaso motor paralysis, swelling, blueness and coldness of extremity.

DR. CHARLES G. BEALL (Fort Wayne) (closing): In closing I have just a little heart to heart confession to make. When I have finished a case, or think I have, I always try to come to some definite conclusion and put down a definite diagnosis, but sometimes that has to be "unknown." I have a card in my desk which means mistaken diagnosis. I do not mean to say that I know all the cases in which I have been mistaken, but whenever I find that I have been mistaken, I put that case down. I am not going to say how many I am mistaken in, but approximately one-half of the cases in which I have been mistaken are those in which I have put down the diagnosis in the psychoneurotic group.

FOREIGN BODIES WITHIN THE RESPIRATORY TRACT*

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In presenting this subject before this section, the essayist is mindful of the fact that his own personal contribution to this special field of medicine has indeed been comparatively small. The writer's interest was forcibly attracted to and his attention held by several personal instances of obscure, severe and long standing pathologic pneumonic conditions, which were cleared up entirely in so far as their etiological factors were concerned, and in which the subsequent therapeutic measures, along practically new lines, were productive of remarkable results.

Even a casual excursion into any field of medicine reveals the regrettable fact that we sometimes fail to make any diagnosis, and that not infrequently our mistakes in diagnosis are revealed upon the autopsy table. Cabot of Boston has given us ample testimony as to the accuracy of this statement. This in part is due to our failure to avail ourselves of the most modern methods of arriving at a positive diagnosis. The employment of the radiograph, fluoroscope, the bronchoscope and its adjuvants, has to an enormous extent aided in the diagnosis of pathological changes in the lungs, clarified their etiology, and pointed toward a more direct therapy. However, even very recent medical literature is replete with records of lung and bronchial affections following the inspiration of foreign bodies, the presence of which were either unsuspected or undiagnosed.

Broadly speaking, a foreign body within the respiratory tract should be considered as anything which normally does not belong there. Here should be included almost every conceivable substance, whether metal, mineral, vegetable or animal. Immediately upon the inspiration of a foreign body, or shortly thereafter, symptoms appear in accordance with the size, shape, chemical composition, character, position and point of lodgement. Here permit me to say that a diphtheritic membrane, laryngeal or bronchial, should always be regarded as a foreign body, which by location, shape and size may produce marked dyspnoea and often fatal asphyxia. A foreign body retained for any length of time may act as a mechanical irritant *per se*, and having reached a final point of lodgement, produce a slow destruction of surrounding tissue as the result of chemical changes, pressure necrosis, or bacterial invasion accompanying the foreign body. While this is true in the vast majority of cases, to prevent controversy, it should also be stated that there are a number of authentic records of foreign bodies *in situ* for even months and years, leaving no pathology which can be demonstrated by radiograph or physical signs.

The symptoms of cough, fever, dyspnoea, hemoptysis, sweats, loss of flesh and strength and so forth, all give a syndrome pointing toward tuberculosis, and after a study of the literature, and from my own personal observation, I am fully in accord with Boyce in believing that there have been a considerable number of authentic and recorded cases of supposed tuberculosis in which unsuspected foreign bodies were coughed up, or removed, with resultant cure. The earliest report that I have been able to find is that of Dr. Arnot, who in 1742, before the Obstetrical Society of Edinburgh, gave the history of a case of consumption cured after coughing up a bone. In 1786, Wells, in the *London Medical Journal*, gave the history of a case of pulmonary consumption in which all the symptoms were suddenly relieved by the expectoration of a carious bone, and the patient went on to a rapid recovery. Through the succeeding years others have reported similar instances. It is not within the scope of this paper, nor do I desire to burden you with the citing of these early cases. I have appended a bibliography and reference for those who are

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sufficiently interested. It should be noted, however, that before the advent of the x-ray, the fluoroscope, and the bronchoscope, these foreign bodies evidenced themselves only through cough, expectoration, the breaking down of tissue or post mortem. Since the more frequent use of the above aids, there are a great number of records of foreign bodies within the respiratory tract which have caused pathological conditions closely simulating tuberculosis, and which conditions cleared up promptly with the bronchoscopic removal of the foreign body.

Killian, Jackson, Mosher and others have remarked upon the rapid recovery of lung tissue, even when the suppurative process had extended over a long period of time with large areas involved. In 1913 Jackson reported a very interesting case in which a glass collar button had been retained in the lung for twenty-six years. At the time of the removal of the collar button by bronchoscopy, this woman had as a result of her septic condition been reduced in weight to ninety-eight pounds. In two years she had regained perfect health and normal weight. In March, 1919, Jackson, commenting on this case, reported her weight as one hundred and eighty-two pounds.

Mr. J. W. B., fifty-eight years old, had for a year and one-half been suffering with a chronic bronchitis, with very severe exacerbations from time to time. He had been under treatment in a sanitarium, and had improved considerably. Recurrence of his bronchitis resulted in a fluoroscopic examination which showed a darkened area about the root of the right lung, which was attributed to calcified glands. Finally a radiogram was made which showed a foreign body. This was removed by Jackson, and proved to be the metal tip of an atomizer, which the patient recalled having used. Prompt recovery followed.

Under my own personal observation, came a patient of Dr. W. F. Smith, of Huntington. John W., a boy of fourteen, had for years been suffering with a constant cough with purulent expectoration in large quantity. At the age of six he had a pneumonia, but did not make a good recovery. His cough continued, and he expectorated large quantities of very foul smelling pus. His symptoms and physical signs were very suggestive of a pulmonary tuberculosis with abscess cavity. Frequent examinations of his sputum failed to show tubercle bacilli. His guardian, hearing by accident of another patient being cured of a similar condition by the finding and removal of a foreign body from a lung, remembered that John at the age of four was supposed to have swallowed a collar button, although there were no immediate symptoms, and it was supposed that the button had passed into the stomach and then on through. A fluoroscopic examination followed by a radiogram, immediately disclosed the button, which was removed by Jackson, with the resultant prompt cure of his condition.

In support of the belief that foreign bodies in the respiratory tract be removed as soon as possible after discovery, I desire to refer to one case reported by Jackson in the Mutter Lecture before the College of Physicians of Philadelphia in 1917. In doing so I want to pay my personal respects to the pioneer in America in this work. Those of us who have been so fortunate as to see Chevalier Jackson in action, have often marveled at his uncanny skill and dexterity. The case just referred to was that of a woman who for many years went seeking health from sanitarium to sanitarium for what was diagnosed as pulmonary tuberculosis. She was brought into the hospital almost dead from repeated hemorrhages and sepsis, as the result of an open safety pin, which was present in the right bronchus. The presence of this safety pin had been known to her physician five years previous, when a radiograph was made, but he had advised against its removal, preferring "to let well enough alone." Jackson made no attempt to remove this pin at the hospital, owing to the patient being *in extremis*, dying the next day.

To intelligently interpret the pathological processes and their production in the respiratory tract by foreign bodies, one must constantly have in mind its anatomy and physiology. Time will permit me to recall to your attention only a few features of the gross anatomy and gross physiology, only enough to serve as a basis for my remarks. At this time let us leave out of consideration the mouth and pharynx, and visualize with me a tube beginning as the larynx, continuing as the trachea, and then bifurcating into a right and left bronchus, the right bronchus dividing itself into three smaller bronchi to serve the upper, middle and inferior lobes of the right lung, the left bronchus dividing itself into two smaller bronchi, to serve the superior and inferior lobes of the left lung; that when these smaller bronchi enter the various lobes, this division and subdivision into smaller and smaller bronchi and bronchioles continue almost to the periphery of each lobe, the entire process in completion, being likened to a tree with its numerous branches and stems, therefore appropriately known as the laryngeo-tracheo-bronchial tree. As a result of this anatomical arrangement, it is evident that each bronchiole serves, brings air to, and drains only a small roughly triangular portion of lung tissue. At the upper end of the larynx we have the vocal chords, whose approximation in the median line and free movement gives rise to phonation, as the direct result of a column of air from below, setting them in vibration. This

presupposes that nerve and other conditions are normal. The gross physiological function of the laryngeo-tracheo-bronchial tree is that of providing a mechanical means for respiration. In addition the entire bronchial tree acts as a means for drainage of secretions, the act of drainage being facilitated to some extent by the upward movement of the mucosal cilia.

Now visualize a foreign body lodged for a length of time anywhere within the respiratory tract. We note the possibility of a stenosis, either partial or complete, depending upon the size, shape and manner of lodgement. If the foreign body be lodged above the bifurcation, there is a greater probability of interference with respiration than if it be situated below the bifurcation, since in the latter event one lung would still be receiving air—in fact would gradually become compensatory in function and action. Yet very large objects like coins and pieces of bone, large enough in themselves to completely block off the respiration, have lodged in the larynx or in the trachea, but owing to their position have allowed air to pass by. In the larynx, especially high up, the foreign body may produce difficult and painful deglutition and cause interference with the voice amounting sometimes to a total aphonia.

The foreign body may lodge in one of the main bronchi or pass into one of the smaller bronchi or bronchioles until it has found a place of lodgement. Wherever that may be, some local pathology will ensue. The foreign body, *per se,* acts as a mechanical irritant. It may react chemically toward the tissue, or the secretions may cause corrosion of the object, roughening its surface, thus further increasing its irritative effects. Acute inflammatory conditions may be set up by the movement of the foreign body by respiratory activities, until it has become more firmly imbedded. In this movement, especially if the object be pointed or sharp, the lining membrane may be traumatized and saprophytic bacteria introduced beneath the mucosa. The lumen may be occluded, the stenosis being complete or partial; if complete stenosis, the roughly triangular portion of lung served will be practically "corked up"—air shut off—a condition of atelectasis, the secretions dammed back, and that part of the lung may be "drowned in its own secretions"; if partial stenosis, there will be some interference with drainage, inflammation, granulation tissue, further increase of the stenosis, a bronchitis, dilatation of the bronchus,—a condition of bronchiectasis. There may be the production of a pneumonia or broncho-pneumonia, the latter more frequent in young children. We may have an interlobular emphysema, the result of trauma, and of powerful efforts at inspiration, the air entering the connective tissue of the septa between the lobules of the lung. Or we may have a vesicular emphysema, which is really a compensating phenomenon, and it means that if one lung or a part of one lung is so changed by pathological conditions, that it can only partially perform its functions, the other lung becomes increased in size and its air spaces are dilated. In my opinion this form of emphysema should not be regarded as a morbid condition. This change in the lung is a healthy one—an act of compensation. It produces no symptoms of disease, although it can readily be detected by physical signs and auscultation. In the same way, but on a smaller scale, whenever portions of the lung are consolidated by chronic changes, in other portions we find areas of dilated air spaces. Further pathological conditions produced are that of abscess cavities, pneumothorax, pyopneumothorax, haemothorax, empyema, and gangrene.

To Dr. H. L. Lynah of New York belongs the credit of calling attention to the presence of diphtheritic membrane, either primary or secondary, within the trachea or bronchi, and the treatment of tracheo-bronchial diphtheria bronchoscopically. I am indebted to him for the substance of the following remarks. In a paper read in 1916 he conclusively showed that a diphtheritic membrane may be lodged within the trachea or bronchus and act as a foreign body, occupying a part of or the entire lumen, thus partially or completely obstructing respiration. The resultant condition is sometimes erroneously diagnosed as a broncho-pneumonia. Lynah believes that not infrequently these cases are primary. They are accompanied by marked dyspnoea and cyanosis and give the physical signs of bronchial stenosis. Inasmuch as in these conditions no nasal, tonsillar or pharyngeal exudates are present, cultures from the throat for the bacillus of diphtheria are negative. The clinical picture is that of a gradual onset, slight occasional cough and roughened breathing. It resembles a slight cold. With such a slight symptomatology, many of these conditions are overlooked, unless a membrane is coughed up, or the larynx becomes involved followed by a typical attack of "croup." As the obstruction continues there is a marked emphysema of the lung in which the bronchus is obstructed, the foreign body acting as a valvelike mechanism, permitting more air to enter the lung than can escape. Lynah states that inspection shows a barrel shaped chest on the side involved, retraction above the clavicle and in the sternal notch, and sinking in of the epigastrium. Cyanosis of the finger tips is a constant sign. The percussion note is that of increased resonance. Auscultation reveals diminished or absent respiratory sounds of the affected side, especially when compared with the harsh

breathing of the other side. Rales of all kinds may be present. There is also sometimes present that peculiar "flapping" sound produced by air passing back and forth over the flapping membrane, when the membrane is partially loose. These cases become very clearly defined, because they are unsuccessfully intubated with the longest O'Dwyer tubes, indicating that the membrane or maybe edema is below the lower end of the tube. The treatment of these conditions is early recognition, antitoxin, and prompt removal by direct tracheoscopy or bronchoscopy. I have no faith in tracheotomy where intubation with the longest O'Dwyer tube has failed. I admit of necessity, that one can through a tracheotomy opening swab the territory below, and occasionally insert a forceps and bring up a membrane. But that is working blindly, and in the dark, and is unscientific. I am in accord with Lynah in believing that when a tracheotomy in a case of tracheo-bronchial diphtheria is not successful because the longest O'Dwyer tube is not long enough to reach below the obstruction, that tracheoscopy or bronchoscopy with removal of the foreign body membrane is indicated. This removal can be effected by forceps or suction through the bronchoscope, the suction being applied through a metal tube connected with one of the various electrically driven vacuum pumps. With the use of the forceps there is a greater tendency toward bleeding. With the suction method, there is less liability for this to take place. The bronchus should be swabbed with antitoxin. The risk of this procedure either in children or in adults in these cases is slight. No anaesthesia, local or general, is required. This treatment by Lynah has proved of inestimable value as shown by the records of Willard Parker and Kingston Hospitals in New York City.

The symptomatology, physical signs and diagnosis of foreign bodies within the respiratory tract, depend upon the character of the object, and whether it be lodged within the larynx, trachea or bronchi. Within the time limit it is absolutely impossible for me to classify the various foreign bodies, and to differentiate their symptomatology and physical signs in accordance with their location. I can refer only to the most prominent features which should direct suspicion toward the presence of a foreign body.

At the time of inspiration of a foreign body there are usually immediate symptoms of irritation, obstruction, strangling, laryngeal spasm, and violent efforts of coughing to expel the intruding object. There are a number of instances in which there were no immediate symptoms of any kind at the moment of inspiration. As the foreign body passes downward, or is pushed down by digital examination or attempts at removal, the alarming symptoms of obstruction and strangulation are apt to grow less and even disappear, causing the erroneous belief that the object had been in the oesophagus and had passed into the stomach. Here I should call your attention to the anatomical condition of the lumen of the trachea being larger than that of the larynx, so that an object within the larynx, causing alarming symptoms of obstruction, may readily pass into the trachea with marked improvement in respiration with partial or even total subsidence of initial symptoms. Additional symptoms may be pain localized at the point of lodgement, painful and difficult swallowing and impairment of voice.

When the object has passed into the trachea, the violent initial symptoms usually subside, and the patient is left with a "wheezing" respiration, or there may be a "flapping sound," which is usually distinctly heard over the trachea and a cough which comes on in paroxysms, and may be very violent. As the result of such efforts at coughing and in addition the powerful expiration, the object may be forced up into the glottic chink and cause sudden marked dyspnoea and even asphyxia. Unless early relieved, a movable foreign body may produce edema and trauma of the tracheal mucosa with consequent additional obstruction and probable infection.

The symptomatology of foreign body within the bronchi has been indicated in my earlier remarks. It is important to remember that when a foreign body has reached a bronchus there may be a cessation of symptoms for weeks and even months, depending upon the nature of the invader, the age and resistance of the patient. Pain may be present or absent. The train of symptoms, although not always constant, is that of cough, cyanosis, fever, sweats, expectoration of large quantities of very foul smelling pus, hemoptysis, and loss of flesh and strength. Physical signs depend to a great extent upon the length of time of sojourn, and the mechanical element. We see contraction of the side of the chest involved and expansion of the other—limitation of respiratory movements, clubbed fingers and clubbed toes—indicating an interference within the lung of the aeration of the blood. Percussion and auscultation elicit sounds varying with the pathology, and has already been considered. As Jackson concretely puts it, "periodic attacks of fever, cough, chills, and sweats, followed by increased coughing and the expulsion of a large amount of purulent, usually more or less foul material, are so nearly diagnostic of foreign body, as to call for exclusion of this probability with the utmost care." And I add to this statement, "especially when frequent examination has failed to demonstrate tubercle bacilli."

To arrive at a diagnosis, the history of the accident, when one can be obtained, must be carefully considered. Frequently there is no knowledge of having inspired a foreign body. When suspected, we should immediately avail ourselves of the fluoroscope, radiogram and bronchoscope. Both frontal and lateral pictures should be taken, as occasionally the shadow of an opaque body will fall within the shadow of the spine and not be seen. In non-opaque bodies, the shadows of the pathological conditions should be carefully studied and compared with the physical signs, and those elicited by auscultation. The bronchoscope should be used for diagnosis, the operator being always prepared for the removal of a suspected object.

For treatment in these cases, there is but one indication—that of removal by bronchoscopy. The risk is slight—not at all to be compared with that of pneumotomy, in which the mortality is close to one hundred per cent. There are practically but few contra-indications—chiefly aneurism, exhaustion and moribund conditions. Jackson in his statistics gives his results in over eight hundred cases as ninety-one per cent successful for removal and cure. Removals have been performed by bronchoscopy under fluoroscopic control. Hickey of Detroit was, I believe, the first to make use of the "giant magnet," applying the same to the chest wall, dragging a closed safety pin from the lower bronchus up through the air passages and delivered by means of a tracheotomy opening.

In this connection it might not be out of place to state that in March, 1921, Lynah and Stewart of New York reported a method of mapping out lung abscesses by means of injections bronchoscopically of sterile mixture of bismuth subcarbonate in olive oil, injecting slowly eight c.c. of the mixture one to two parts, followed immediately by fluoroscopic examination and radiogram. This mixture is harmless, soon passes out and while apparently of no therapeutic value, improvement has been noted in the cases in which it was used. This method opens up a field of study which certainly will be of help to the thoracic surgeon and has great possibilities for the internist and bronchoscopist.

In conclusion, I would like to say that this paper is but an humble effort to direct attention to the more frequent use of these most modern agencies in diagnosticating some of our obscure and long standing pulmonary cases, especially those in whom a specific causative factor cannot be demonstrated. The bronchoscopic treatment of tracheo-bronchial diphtheria should merit your attention and investigation as a means of saving lives.

DISCUSSION

DR. ALFRED HENRY (Indianapolis): As indicated by the subject of the paper, we know that foreign bodies produce many different types of pathology. Lodged bodies may produce pathology anywhere in the lung, in lobules or in the whole lobe, or the right or left bronchus. You can see how we can get gangrene with a foreign body in a small tube. We have a laceration, with inspired circulation and respiration, next we have infection and the respiratory tract nearly always responds to that, so it is easy to see how a foreign body can produce abscesses or gangrene. If a foreign body obstructs a bronchial tube the air that gets in will dilate, this causing bronchectasis. In fact, one of the first things that is produced is a capillary bronchitis. The foreign body produces a condition that carries with it a good deal of exudate and that is responsible for the rales. Then if we have some foreign body that is sharp and cuts, which subjects the tissue to further insult, trouble is more surely to be brought about.

The gist of the paper seems to be diagnosis, and when we come to diagnosis we have to differentiate and thereby hangs the story of a great many cases. You have bronchiectasis, empyema, a pleurisy with effusion, and gangrene of the lung—you have all these to consider in differentiating. Of course, the first thing is the history, but the essayist says that in some of these cases there is no history. I say we must get down to brass tacks and go clear to the end in this history taking. I take it that everything in the way of disease has some symptoms that aid in making a diagnosis. When we are in the field of pathology we have many indications. In tuberculosis we have red letter signs—we talk about the hemorrhage, but I think we do not have excessive hemorrhage from foreign body cases. We do not necessarily have a feeling of malaise, which is the first symptom of tuberculosis. We do not have tubercle bacilli, we do not have the tuberculin reaction, we do not have complement fixation in the foreign body, but we do have the x-ray, thus we have two or three red letter symptoms in the diagnosis of foreign body. If we will take these red letter symptoms and work them out we can go further along in the diagnosis, and that is the most important point.

DR. C. A. SELLERS (Hartford City): It would seem to me from the standpoint of a general medical man, that the question should hinge on a correct diagnosis, as the previous discussant has stated. I do not believe that the x-ray findings can be absolutely relied upon, except in reliable and experienced hands and then in conjunction with the clinical findings.

There is one point in this paper which I think demands our careful consideration, and, what

I wish to say on this point is not from the standpoint of criticism but from the standpoint of conservation of our patients; that is in advocating the use of the bronchoscope in broncholaryngeal diphtheria. Those of you who have seen broncho-laryngeal diphtheria (which is usually diagnosed as a broncho-pneumonia), especially if this diptheretic membrane is quite complete, will certainly hesitate to advocate the passing of a bronchoscope. It may be safe in the hands of the very expert to lift out a free membrane that has lodged in the larger bronchus, but when you have evidence of a diffuse broncho-pneumonia one had better depend upon his antitoxin.

DR. JOHN F. BARNHILL (Indianapolis): It has already been pointed out in the discussion which has preceded that there has been an unaccountable inertia on the part of many in the profession concerning foreign bodies in the lung. This is unfortunate, because no class of ailment requires more prompt, more intelligent or more efficient attention than this. It is only by early, intelligent service on the part of the physician that actual tragedy is averted. It has been my misfortune to witness such tragedies. It also has been my supreme joy, with the efficient cooperation of attending physicians, to remove many foreign bodies and to see the patient live on. Often the most serious obstacle to successful removal is a delayed, mistaken or uncertain diagnosis, or failure to make any diagnosis at all. This is usually inexcusable. X-ray service may now be had in the larger cities and towns, and by this means the foreign body may be discovered at once, especially when metallic. The real trouble comes when the foreign body is organic, as a pea, bean or nut. It is in these latter cases that the services of an expert diagnostician are most needed. With the aid of this service and the history of the case as a guide, a correct conclusion may almost certainly be attained.

Within the past two weeks I have seen a case which exemplified the need of greater caution and interest on the part of the physician in the diagnosis of suspected foreign body cases. A child with a peanut in its mouth tried to go through a door, when the door slammed against him, startling him, and causing him to inhale the kernel of the nut into his right bronchus. The mother stated that the child struggled for breath, got blue in the face and nearly died. He then recovered somewhat but was not as before, breathed badly, would not play, and wished to be held in the arms constantly. When the child walked or otherwise exercised he was greatly distressed by cough and impaired respiration.

The above history is pretty typical of what occurs in nearly all cases of inspired foreign body. Keen physicians should suspect the real cause in all such cases, and should give the most painstaking and thorough examination to ascertain the facts. Many who inhale foreign bodies die in the first paroxysm, and within a few minutes. Should they survive, however, patients often seem more or less normal after a time, except when they exercise. It will be apparent to the observing physician that they are not normal, and a painstaking examination of the lungs will detect the reason.

The doctor first in charge of the case here described expressed the belief that there was nothing serious and that all soon would be right. Another physician was consulted, and while he believed the case not serious was yet cautious enough to advise an x-ray examination. The child was brought to the Methodist Hospital, where plates were made which showed collapse of the right lung.

While we were in the surgery with everything ready to do a bronchoscopy word came from the child's room in the hospital that he had died from sudden suffocation. Evidently he had coughed the peanut from the completely obstructed bronchus and then immediately sucked it into the only open one.

The time certainly has come when foreign body cases should be more frequently and promptly recognized. Both physicians and surgeons are always alive and active in the early diagnosis and operation of appendicitis, gall stone and other abdominal cases. This cannot be said of them in foreign body cases as yet. One of the discussants has intimated that patients suffering from foreign bodies in the air tract have been sent to climatic resorts in the belief that the case was tuberculosis, and that such failure to proper diagnose is a disgrace. Of course it is, and is below the high standard of Indiana medicine. It is because of indifference, not ignorance. But since the result is the same, there should be an awakening to the importance of the subject.

DR. KREBS (closing): I wish to thank the gentlemen for the kind reception of this paper. It is true as Dr. Henry stated in his discussion that a history is not always present. He doubted if it could be obtained. It has been my experience that you can usually obtain a history in a case of voluntary inspiration of a foreign body. In the involuntary variety, there may be no history; especially is this the case in those of unsound mind, and in those patients addicted to the use of drugs. Dressmakers who are in the habit of holding numerous pins in the mouth while fitting are unable to state whether a pin has been lost or not. Pins have been known to go down head first, without any immediate symptoms, thus making the diagnosis more difficult.

In regard to the x-ray, it is not always to be depended upon. A tooth will not always give a picture. Again an opaque body may fall within the shadow of the vertebral column and will not show.

Dr. Barnhill's discussion proved very conclusively and dramatically how easily and rapidly a child may be asphyxiated by a foreign body being coughed out of the bronchus of the already completely closed lung, and immediately inspirated into the other lung.

The question of doing an intubation, a tracheotomy or bronchoscopy in diphtheria, depends to a large extent upon the location of the membrane. If the membrane is situated low down within the larynx, you may not be able to push it aside even with the longest intubation tube. The length of the intubation tube used is limited by the size of the mouth. If the results of the intubation are unsatisfactory, you may resort to a tracheotomy, with its attendant dangers. Yet through a tracheotomy opening you may be able to reach up or down and remove either the entire or part of the obstructing membrane. All of this can be easily accomplished by a laryngoscopy or bronchoscopy, and there is less danger of infection or trauma, and the risk is very much less than that of an intubation or tracheotomy performed by the average man. I still maintain and believe that the method outlined in my paper is perfectly justified and is to be indicated as a regular procedure especially when the membrane is low down.

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GROUP MEDICINE DIAGNOSIS*

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Mr. President, Members of the Fourth Councilor District Indiana Medical Society, Ladies and Gentlemen:

The writer recalls his wonder and amazement, when he first attended the Medical, Surgical and other Clinics at the Medical Department of the old University of Louisville, in the early nineties, and watched the professor "make the diagnosis". As he now reminiscences, he remembers the feeling of delight which overcame him when *he* first began to get a glimpse of the plan, the professor, in those days, pursued, in order to establish his diagnosis. He wondered then at the possibility of exactly knowing what was the matter with the patient and he was amazed at the idea of the professor's accuracy in the summing up of his opinion.

Almost thirty years have elapsed since these observations were made. In this long span of time much in diagnosis has been rewritten, but be it said to the credit of the men of those and earlier days, their work was so well done, the avenues by which they were to reach their conclusions were so carefully and searchingly explored and the plan so well executed, that we may largely depend, even in these more modern times, upon the same rules and regulations then in vogue, and feel assured that we are not far from the truth of a correct opinion.

When your president, Dr. D. W. Weaver, did me the honor recently to request me to address you this evening, I cast about for a theme which I might, with propriety, present, finally determining upon the general subject of diagnosis. Though there may be many and possibly much more alluring subjects for an audience like this, I felt that it might please us and maybe profit us to spend our time recounting, more or less in detail, the plan by which the modern day doctor approaches the accurate diagnosis of his patient's case.

To be a success at any work or any endeavor, one must understand what is before him. The successful farmer, the successful stock breeder and stock raiser, the successful plumber, the successful butcher, the baker or the candlestick maker, the successful preacher, lawyer, doctor, whatever the calling, vocation or profession, in order to succeed at it, he must know it and devote himself to it. If he does, there is no higher accomplishment than its successful performance, whatever it be. Among the very difficult tasks, which requires the highest order of intelligence and exacts the most untiring devotion to duty, none exceeds the calling of the physician, whose work deals with God's masterpiece—*man*. The complexity of the human organism and its mechanism, its masterful performance in health and its strange performance when diseased has occupied the best minds and best talents from the beginning of creation. Slowly but surely the veil has been lifted, and, one by one, the inner and more hidden recesses of the human animal have been explored and explained, until the medical man of the day, after examining the patient, as a whole, has been enabled, almost, so to speak, to disassemble the parts, interpret each separate part, and again to re-assemble the patient, even as the mechanic in the automobile industry becomes skillful in the disassembling and re-assembling of the machine.

Present Day Plan of Approach to the Diagnosis:

(1) History Taking.
(2) General Physical Examination.
(3) Special Examinations.
(4) Laboratory Work, including x-ray.

Each of the above divisions is further considered, divided and sub-divided as follows:

The History Taking. No part of the diagnosis is more important and requires greater skill, tact and patience than is necessary, in order to obtain a correct and dependable history.

*An address delivered before the Fourth Councilor District, (Indiana) Medical Society, at its annual meeting at Seymour, Indiana, May 25, 1921.

Not every physician is capable of obtaining a history. Indeed, I have frequently had patients say to me, "I could not tell that doctor *anything* about myself; he is too curt and too short and entirely too unsympathetic." Or I have had them say, "I wanted to tell the doctor how I felt and what was the matter with me, but he seemed to repel me, or he seemed to think he already knew all about me." To get the salient facts from the patient, as has already been stated, requires skill, tact and patience, neither more nor less of any one of these faculties and attributes, but surely much of all three. In our work, I have cautioned my associates to strain every energy and to bend every effort to discharge their fullest duty in *"the hearing* of the patient's story". We look upon the history taking as one of the most, if not the most, important single procedure in our effort to establish our diagnosis. Individual patients require individual handling in this as in other regards. Not every patient's history is to be obtained alike, but rather each patient's history is gotten after his or her particular fashion and liking. Some patients are loquacious, others are reticent, some are truthful, others are treacherous and deceitful, some are intelligent, others are stupid, some are easy and some are difficult. We never attempt to take a history hurriedly, but always aim to give all of the time necessary for its proper taking. We never feel that we have done justice to the history taking when we have devoted but one period of time to it, but rather prefer to go over the items, again and again, with the patient (or those accompanying the patient), and we like to do this on other days than the day the history was first taken. When the history taking is complete, we ask ourselves this question in the clinic, "In what direction does the history lead?" By this we mean, does it lead us to assume that the chief deviation from the normal involves (1) the Digestive System, (2) the Respiratory System, (3) the Nervous System, (4) the Skin, (5) the Genito-Urinary System, (6) the Osseous System, (7) the Joint System, (8) the Muscular System, (9) the Glandular System, etc., etc. Whatever may be the special direction or directions into which the patient's relating of his history leads us, we then undertake to develop this particular direction or the particular directions, by a special inquiry, studiously devoted thereto, a so-called "Special History Taking". In Group Medicine, as we conduct its practice in the clinic, we have found it well for several different members of the staff to take a hand in the developing of the history of each patient. We thus get important data previously overlooked.

History Sub-Divisions. Among these subdivisions may be briefly mentioned (a) Present History, which represents what the patient has in mind to tell the physician of his present condition. The present history is what actually brings the patient to consult the physician. Often this is all important, as for example, when it includes sudden departures from the normal, viz., chill, fever, sweat, general discomfort, with lancinating pain at the base of the right lung, cough and blood stained or brick dust expectoration. These are classical manifestations of a pneumonia and may be all the history that is available or need be obtained. In the vast majority of instances, however, we desire a carefully taken history of the preceding state of health, that is the health immediately preceding the beginning of the complaint. When the *status praesens* has been fully developed, (b) the Past History is inquired into. This includes all of the past, namely, from birth to the beginning of the present illness. We should know what diseases have been suffered, when they were suffered, how severe each disease was, what complications were present, and what sequelæ, if any, followed. We are interested in knowing *when* and *how often*, and *for what reason*, the patient was last in bed. The diseases of adult life, previously suffered, including the (c) Diseases of Infancy and Childhood, any and all may have a very positive bearing on the present ailment. In any event, the earmarks thereof may be looked for in the final estimate, which we will make of the patient.

Only the doctor who has taken pains to elicit every part and parcel of the history, past as well as present, including sometimes the seemingly most remote and insignificant facts, will succeed in adding that finer touch to history taking, of which Modern Day Diagnosis boasts. The patient whose train of symptoms leads us very positively in a certain direction will oftimes fail to tell the physician certain facts which have a most important bearing on his case. We must remember that the untrained mind of the patient in nowise fits him to make plain the salient points to the doctor. We must also remember that there are certain facts in the life history of patients which may have entirely escaped the recollection, but which will be recalled and sometimes vividly described, if we but carefully lead the patient back into the past.

I have in mind the history of a most intelligent patient, a man of culture and refinement, the trusted employee, throughout a period of fifty years, of a railroad and bridge company. When the gentleman first consulted us and a diagnosis of tertiary syphilis was made, he was wholly unable to accept it. There was no question in our minds as to the findings, though the history of the patient was deficient as to the date of any infection. He was a married man, past 65 years of age; his wife, living, and, though her health was not good and had not

been good for years, she presented no present evidence of a luetic infection; she recited no history that was even suggestive; she had been pregnant one time only, had had no miscarriages, had given birth to a healthy child, who in turn was the mother of a lovely, healthy, young daughter, some twelve or thirteen years of age. The patient himself had seemingly been in perfect health throughout all of his married life. Indeed, he could recall no illness of any sort whatsoever. Bilateral, palpable, discrete glands, absent knee jerk, Argyll-Robertson pupil, choke disk, unsteady gait, "gastric crises", positive Babinsky, together with a "four plus" Wassermann, made the Diagnostic Summary complete. Weeks after the man was under treatment, his chief symptom being high blood pressure, with headache and vertigo, he recalled and gave me a very accurate account of his having suffered "some sort of a venereal lesion", now clearly remembered. He was, at the time, working with a railroad bridge crew in Tennessee. Pay-day came around. Together with other members of the crew, all older than himself, he journeyed to Nashville for the week-end, and there, having illicit intercourse, suffered an infection which quite incapacitated him for some time. The facts were recited, just as I now re-enumerate them for you. It was necessary for him to temporarily give up his position. An older brother was sent for, who took him back to his home in Pennsylvania, where he had a "thorough course" of treatment with "mercury and potash". Could a faulty history be made more positive than by a recital of such facts, and yet the memory tablet was at first entirely lacking?

Then, there are the patients who, in order to tell the doctor all that he desires to know and should know, would require the unbosoming of the most sacred recesses of their souls. How often do we meet with these patients and how difficult is it to get the facts! It would be easy for any physician to recall innumerable instances, illustrative of cases of this sort. One or two more should not be amiss, ere we leave the important department of History Taking.

A young miss, age 16, was brought to us from the mountains of Eastern Kentucky. A beautiful brunette lassie. She was suffering from a very acute nephritis, which had suddenly arisen some four weeks previously. I do not recall having seen a more pronounced clinical picture: Edema, amounting to general anasarca, pyrexia, furred tongue, nausea, with persistent vomiting, anorexia, complete. Examination revealed: Rapid heart with some hypertrophy of the left ventricle, albumin, four plus, with hyaline, finely and coarsely granular casts, and with a low urea output. She presented a retinitis albuminurica. The nervous system showed such evidence of intoxication as to make us fear uremic convulsions. The past history revealed nothing that would justify the faintest reason for the condition. She had visited, beginning some six months previous, in the South and was supposed to have become infected with the malarial parasite. A letter to us from her physician was to the effect that she had been treated by him for such a condition and that the kidney state was secondary to the plasmodium. The blood failed to disclose the Laveran organism. Ours, however, was the first blood examination which had been made. The patient had simply been treated symptomatically for malaria, because she had recently resided in the malarial zone. What was really the matter with this child? Simple enough, though tragic. She was pregnant. She *knew* what was her trouble, but was unable to disclose it. I shall never forget the tragedy connected with the case—the presenting by me of the true facts to a heart-broken mother, then the later accouchement of the young mother and the finding of a home for the baby. So, I recall other instances in which, when the patient had disclosed the secret of his soul and unbosomed himself to his doctor, the diagnosis was immediate and the treatment quickly effectual.

Genito-Urinary History. Too much emphasis cannot possibly be laid upon the obtaining of an accurate genito-urinary history. We must not lose sight of the fact that venereal infections often occur at a time in life when little attention is paid by individual to self. Furthermore, we must not lose sight of the fact that men have been taught to believe that venereal lesions are of little consequence, therefore they forget such infections. It has been said that the civilized world is rapidly becoming syphilized. Let us therefore inquire searchingly of the sexual life of our patients.

Family History. More and more, we come to discover the importance of giving consideration to the family history: Age of father and mother, their previous health, if living; otherwise the cause of death of parents as well as the state of their health during life. The number of brothers and sisters living, their state of health. The number dead, the cause of death of each, with an accurate account of their previous health. We do not go amiss when we make even further inquiry into the health of the grandparents on either side, as well as the health of uncles and aunts.

Heredity. Under this caption, we have in mind chiefly nervous and mental diseases, though we also give consideration to malignancy, tuberculosis and nephritis.

Place of Abode. In the taking of the patient's history, it is interesting to know not only where the patient lives at the present time, giving due consideration to certain localities, as being more

salubrious and affording more healthful surroundings than others, but it is also proper and very important to learn *where* the patient has previously resided and for how long a period of time. In these days, when a successful warfare has been waged against the malaria bearing mosquito and against the typhoid germ, we at once realize the importance of knowing whether the individual who seeks our aid has been in the swamps of Mississippi or Alabama or has lately been in the outlying country district, where he, perchance, partook of typhoid infected water. Not infrequently does the latter infection come about, now that the motor car has become ubiquitous. Following Sunday afternoon drives into the adjoining country, and week-ends spent with the family at some resort, not infrequently the germ of Eberth finds lodgement and grows.

Marital History. In the clinic, we have frequently found it of primary importance to get a complete marital history. This should include not only the present marriage, but previous marriages, if any. Now that the divorce courts make it so easy to obtain release from connubial dissatisfaction, it is not infrequent that the patient has had previous "encounters". We want to know the health of the mate, the number and health of the children, miscarriages, if any, and how many. Recently, a male patient had difficulty in understanding why we were so persistent in knowing about his wife. We even like to know and strive to discover the family relations, as to whether they are pleasant or unpleasant. Many a man is sick and suffers from the intoxication of overwork and worry whose wife and daughters spend more than he can make. Many a man is ill on account of business reverses, which may be wholly beyond his control and fault, or which may be the result of his inattention. Many a woman is sick because of a faithless husband, and many a mother is sick because of a wayward son or daughter.

The occasion will not permit of the devoting of more time to the consideration of history taking. May I say that it has been my experience, throughout more than twenty-five years of activity in medicine, where diagnosis was uppermost in my mind, that the carefully taken history more frequently makes the diagnosis than does the carefully made physical examination. In the practice of Group Medicine, which has occupied us now more than four years, we can corroborate the observation of other groups, that the history is of paramount importance.

General Physical. By the general physical examination is understood, first, a careful inspection of the patient. This includes his height, weight, posture, gait, type, general appearance, nourishment, his mentality. We examine the skin, the hair, the nails, the glandular system, the muscular system, the osseous system, the joints and the nervous system. The examiner notes in detail any deviation from the normal which he finds, to be further studied by the special examiner. For the General Physical, the patient is stripped to the skin and examined in the sitting, standing and recumbent postures. The examiner accurately describes abnormalities and deformities, wherever they are found. The patient is carefully questioned as to all accidents and injuries which may have been suffered during his lifetime, including shocks, if any, to his nervous system. Previous operations are described, when and by whom done. As a rule, few patients know much regarding the surgical procedures they have endured. And strange as it may seem, they usually know less about major surgical operations than about minor pieces of work.

Special Physical Examinations. We divide the Special Physical into (1) a carefully made physical of the head and neck; (2) a carefully made physical of the (a) upper extremities and (b) the lower extremities; (3) a carefully made physical of the thorax; (4) a carefully made physical of the abdomen; (5) a carefully made physical of the pelvis and (6) of the rectum.

Physical of the Thorax. This includes the heart, the lungs, the mediastinum. In the making of the physical of the thorax, we include a careful survey of the entire vascular system. The thyroid gland is examined, noting any variation in size and whether the function of the gland is normal.

Physical of the Abdomen. The examination of the abdomen is done by several members of the staff. It is first done by the medical side of the staff. Thereafter, the digestive tube is emptied by a laxative or by enema or both, and the examination repeated by other members of the staff, including the surgical side of the house. Because the surgeon more frequently sees the interior of the abdomen (unless the internist has similarly had a large experience, ante and post mortem), more weight is usually attached to his findings. In our opinon, there is no basis for such a view. In the making of the abdominal examination is included a report of the condition of the rectum, the anus and of the sphincter. A report is also made of the kidneys, stating whether both organs are palpable.

Genito-Urinary Examination. The Department of Urology and Genito-Urinary Diseases makes this examination. It includes a survey of the external genitals, an examination of the urethra, together with the use of the cystoscope. In the male, the prostate gland and seminal vesicles are interrogated. Smears are obtained and cultures made, where required. In the female,

the Genito-Urinary Department makes its investigation after the Department of Gynecology has first made its examination.

Pelvic Examination. This examination includes the vagina, meatus, perineum, the uterus and adnexa.

SPECIAL EXAMINATIONS — *Dentistry.* The Dental Department makes a report of the condition of the mouth and teeth. Such teeth are subjected to x-ray as the Department of Dentistry designates. The Dental X-Ray Department is separate and apart from the General X-Ray Department, being under the supervision of the dental member of the staff. This department not infrequently *clears up* a difficult diagnosis and occasionally makes the diagnosis *in toto.*

Eye, Ear, Nose and Throat. The Department of Eye, Ear, Nose and Throat makes a scrutinizing examination of each patient, very frequently throwing such light on the case as to make the final interpretation and the general "sum up" much easier.

Orthopedics. Each patient is subjected to an examination by the Department of Orthopedics. Recently, we were wonderfully repaid by the findings reported by our Dr. Pirtle. A gentleman, age 41, had been suffering, at times, indifferent pains with more or less general discomfort all the time. He had been given sundry and diverse prescriptions, without benefit. The Orthopedic Department discovered a shortening in one leg, amounting to three-fourths of an inch, which resulted from an injury to the spine and pelvis, suffered in a railroad accident, fifteen years before. The patient had previously omitted telling us anything about this serious injury, which was the whole cause of his present ailment. X-ray disclosed the exact damage, long since crudely repaired by Nature. Adding three-fourths of an inch to the inner sole and outer sole of the patient's shoe, all of his pain and discomfort disappeared.

The Laboratories. Every patient who passes through our clinic receives a certain amount of Routine Laboratory Work—

(1) Urine:—This includes not less than three examinations of the urine, often four or more, both chemically and microscopically. At least one twenty-four hour specimen is included. A Kidney Function Test is regularly done on all patients whose urine shows marked deviations from the normal.

(2) Blood:—A blood examination is done on every patient. This includes hemoglobin estimation, red blood count, white blood count, differential count, together with a search for pathological cells and parasites.

(3) Wassermann:—A routine Wassermann is done on every patient. This is a Blood Wassermann.

(4) Spinal Wassermanns are not frequently done.

(5) Basal Metabolism is undertaken, wherever indicated.

(6) Blood Chemistry similarly is carried out, when indicated.

(7) Sputum examinations,

(8) Gastric analyses, and

(9) Feces examinations are frequently done.

(10) Goetsch and other tests are done, whenever indicated.

Roentgen Rays:—X-ray is routinely done on every patient. This includes fluoroscopy and plates of the chest, usually stereoscopic plates. A gastro-intestinal examination with the x-ray is also done, using the fluoroscope from mouth, through to anus. Plates are exposed, where indicated. Where the history or the physical examination makes the suggestion, x-ray examination is made of (1) the head, in particular of the sinuses, (2) the gall bladder region, (3) the urinary tract.

A very natural question arises in the minds of gentlemen who are not familiar with Group Medicine and Group Diagnosis. I shall anticipate this question today. Men wonder not as to the need of such scrutinizing survey of patients, but they wonder as to the Method of Management of Group Practice. It may not be amiss for me to say that the making of such an examination contemplates a large staff of men and women, and certainly a large equipment. If the group is to succeed it must be composed of individuals of large practical experience, its members having been well grounded in the science and art of medicine. Of absolute necessity and of primary importance to success is a Chief of Staff, who directs the enterprise and who carries the major responsibility. It has been said that "Every successful Institution is the Lengthened Shadow of a Single Man". Nowhere is this more certainly true than in Group Medicine.

Group Diagnosis affords its devotees a satisfaction that can only be understood by those who have access to it. A group should be located in close proximity to every city of any size. The members of the group will benefit largely by their association. The profession, whom they assist, and the public, whom the Group serves, will benefit even more. Modern day diagnosis is the more accurate in proportion as the Group undertaking the diagnosis is composed of men specially trained for the more especial work.

THE PHYSICIAN

DUTY TOWARD THE PSYCHOLOGICAL DEVELOPMENT OF CHILDHOOD AND YOUTH IN THE HOME*

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Of the various organic systems of the body, Nature points out that which is most important. The bony skull and spinal column indicate the precious nature of the contained structures—the brain and spinal cord. With other organic systems medicine has made tremendous strides toward conserving integrity. In the case of the gastro-intestinal tract elaborate sanitary measures have been established to protect against contaminated water or food-stuffs. Carefully wrought-out instructions have been devised concerning the danger of lung injury by the inhalation of infectious, physical or chemical substances. Much has been written about the tonsils and teeth as portals of entry of pathogenic organisms to the body. But what has been done to guard the central nervous system from mal-development or to foster normal development of this, the presiding and supervising genius of all our functions?

Man as a sentient and thinking being is such because of his central nervous system. Its proper functioning underlies efficiency, attainment, contentment. Who will contend that the growth and powers of the central nervous system are not influenced by heredity, environment or training; or deny that its capacities may be retarded by accidents, obstacles and rebuffs? Conversely all acknowledge that its growth and stability are favored by good mental hygiene, methods which bring encouragement, achievement and establish the habit of nervous stability. During the moulding period of childhood and youth, good training will make, just as bad supervision and direction will mar, the capacities for mental and moral achievement. How great therefore the responsibility of those charged with the rearing and education of children.

To those on whom this privilege and task falls, it should be the duty of the physician to make plain the nature and seriousness of habit formation. First let it be made clear that acts often repeated become second nature, the nerve-center reactions and impulses causing structural changes, which persist just as do scars from injury.

Many of the body acts are at first instinctive but later become from repetition habitual; as the taking of food. Other acts require at first the exercise of reason but later are performed automatically without the use of the higher intellectual faculties. A pianist, for example, reads a difficult composition. In the learning this is an intellectual process. The piece is played over and over again until memorized. Now the composition is rendered without detailed mental effort, the fingers performing the intricate movements more perfectly than was at first possible under mental concentration. The procedure is a complex finger movement which the sub-conscious and reflex centers execute with amazing celerity and skill. In like manner writing, walking and talking are at first mainly intellectual procedures but with endless repetition, the subordinate centers take over the performance. The same principle of sub-conscious and automatic control underlies all manual pursuits. Habit formation, then, is at the bottom of both the artistic and useful accomplishments in life. All have a physical basis in the central nervous system and when once well learned one may properly say that a record has been made and preserved in the sub-conscious realm of the nervous system. Once in a while when desired the intellect, through the memory, pulls out a record but the sub-conscious and automatic centers must be depended upon to reproduce the details, e. g., piano playing, skating.

Just as good habits are acquired by proper training, so do bad ones arise from improper methods. When Shakespeare wrote, "How use doth breed a habit in a man," he had in mind the unfortunate results of bad moral training. Acts at first consciously wrong, repeated over and over, lose the pangs of guilt, coming gradually under the control of the half-conscious centers which in time dominate even the intellect and the will. The individual becomes the dupe and slave of his brute impulses. For example, violation again and again of the seventh commandment leads ultimately to supremacy of the sexual instincts over the intellectual and moral centers, resulting in a prostitute—male or female. Habit channels are worn deep, producing structural alterations not likely to be righted, or at best most difficult to change. Is the prostitute or the confirmed drunkard easily reformed? No, because permanent structural damage has been done to nervous tissues. Does not the same physiological law hold good with regard to other immoral habits as well as mental and temperamental faults of adult life? One of advanced maturity only needs to consult his own observations and acquaintanceship with people to support the contention made. Have you not known children of violent and uncontrolled tempers who became naturally, almost inevitably, irascible and unreasonable men? Have you often observed indolence and slothfulness in a boy followed by industry and orderliness in the man? Cynicism, pessimism,

*Twentieth of a series of articles by Dr. Wynn which are appearing regularly in THE JOURNAL.

selfishness, whining, faultfinding, lying, carelessness, slovenliness, when found in the adult are dominant characteristics which might, by proper training during the moulding period, have been prevented or greatly modified. Uncorrected in childhood and youth they become habitual handicaps. As with Cain of old, they stamp the individual with the mark of inefficiency throughout life. Whilst the test-tube and microscope may not have demonstrated the existence of tissue changes in these cases, as observant physicians are we not convinced that acts long repeated during the moulding period of life, eventuate in physical changes in the nervous system as real and difficult to efface as a scar upon the arm?

The more general acceptance of the seriousness of these truths should impress upon the world the extreme importance of correct training during the growing period of life. The music master does not hope to develop a great violinist without patient and painstaking instruction of the pupil in childhood. The building of good character or stable temperament, by wise and tactful control in childhood, is just as important as the making of a good musician.

The prevention of bad habits and the cultivation by proper training of good ones is the greatest mission of parents. Correct habit-building should be the chief purpose of education. That the present age falls short of duty and opportunity is often apparent in the home where the responsibilities of motherhood are put aside for the glare and whirl of social life; or in the case of the father, in whom the place of parental comradeship with sons is usurped by commercial or professional ambition. And in schools and colleges the disposition is to cram the brain with mere knowledge rather than to build well the foundation for character and self-mastery. Many parents unfortunately entertain the false view that childhood is a complexus of carnal impulses which in the course of time will burn out and leave the organism unharmed. As well might the farmer say, "Let the weeds grow, the corn will take care of itself." Without discipline, tactful but firm, there can be no schooling in self-control, and a bad foundation is laid for habit handicap later in life. The parent who draws back from the correction of a child, kindly but firmly, is not generous but selfish. Too often the world indulges in a sort of maudlin glorification of the mother who indulges her children excessively, excusing it on the ground of her supposed love for them. The fact is, she is coddling her own selfishness; sparing her own feelings of present discomfort. The higher and truer form of love for her offspring would look to the future of the child, and be willing to make sacrifice of feeling now for the later good which would bless the life. Any other course is short-sighted—often it means the sowing of seed which will reap a whirlwind of misfortunes in later life.

The writer accounts himself unusually fortunate in having had parents unafraid of duty in these respects. My father, extremely devoted to his children, had a far-seeing mind and an acute conscience which took in our lives as totalities—the present and future potentialities for good and evil. In every parental emergency, the query submitted to his conscience was, "What is best not merely now but for the full rounding out of my child's life?" With quick decision he saw and executed, kindly but unwaveringly. A personal illustration does not make the example less instructive.

The writer, like all healthy country lads, had a voracious appetite for the good things of the table, often to my later distress. With sound reasoning father placed a ban on these excesses. When occasion arose for the possibility of appetite abuse, the law was applied, whereupon I protested in fury and created a "scene". Without more words than that one helping was enough, he called for the "cold towel". This was wrung out of ice-water, then applied over my face and neck, causing several deep inspirations and the cooling of my wrath. With every impassioned outburst this was repeated. On his part there was no anger—no quibbling or argument. Whether at the table or elsewhere, any of my emotional explosions were treated in the same manner—always with a calming and satisfactory result. A few months of this treatment established my self-control.

Of the definitely recognized, functional, nervous disorders which arise during childhood or adolescence, hysteria is perhaps the most frequent. Whatever the hereditary background or individual predisposition, it is universally recognized that mental and moral factors bring on the storm—the loss of inhibition followed by an overwhelming flood of emotions. These tremendous reactions must of themselves produce marked changes in the nervous centers. A few such explosions and the "hysterical habit" is established for life. A trifling assault only is necessary to knock down the floodgates of inhibition, and away goes the maddening stream, sweeping reason and judgment before it. Knowing these things to be true, should we as practitioners, not more frequently seek to anticipate and prevent the growth of the "hysterical habit"? Let a general practitioner, in whose office the writer was a student, speak in his matchless way upon this subject.

In the practice of Dr. S. was a family of high social position and ample means. The parents were over-indulgent to their two sons and a daughter just budding into womanhood—a

beautiful girl whose every whim was gratified. She lay abed in the morning late, often eating breakfast in her room. No household duties were required, certainly no drudgeries or tasks which called for patience and personal sacrifice. There grew up in her mind the idea that nothing she was called upon to do should be hard or disagreeable. Her mother was always cautioning her against anything that would make her tired—mentally or physically—as though it were a sin to exercise brain or muscle to the point of fatigue. Thus coddled from year to year a superior product of inefficiency resulted. It was easy to predict what would happen later in high school and college. The hard subjects were shied at or side-tracked for easy elective courses which did not require so much effort. Even then examinations often brought failures which maternal sympathy protested against. There were lapsed hours and days, with feeble excuses of headaches, calling for a doctor's certificate, which he always made out with a wry face. Social functions were entered into with zest until things went counter to her pleasure; then ensued a nervous explosion. Was it the failure of her lover to take her to some coveted entertainment, or a quarrel with someone in her "set",—up went her anger in uncontrollable emotion and down her spirits to the depths of prolonged despair. These tantrums were becoming more frequent and the doctor felt called upon to do more than prescribe valarian and bromids. He asked a conference of the parents and daughter in his private consultation room. Seating them he began, whilst I (by his suggestion) eaves-dropped from the little drug room in the rear. "As memory recalls," he began, "it is about twenty-five years since I came into your lives. It has been a fine relationship, more precious to me in the mutual confidence and friendship enjoyed than in the material rewards. John, I have seen you and Mary through some pretty tight places, and now you are in another. It is a most delicate matter that I want to discuss with you, and the expression of my opinions may cost me your friendship, but I shall at least enjoy the consciousness of having done my professional duty. In order to avoid an unseemly quarrel at this time, I am going to ask you to keep still until I have finished. Then let us see if we cannot shake hands and start in with unwavering determination to win this battle. Now while Helen is the subject of our anxiety at this time, I want to say that I honestly think that her parents have been more to blame than she has been. You have allowed her instinctive impulses to have sway until they have become habitual, dominating the finer traits of character. You are making out of her a physical, mental and moral "tenderfoot"—no physical endurance developed, no intellectual tenacity cultivated, no moral stamina and self-control to balance, co-ordinate and carry through the problems of life. For this neglect she is reaping the penalty in these nervous explosions. It is developing into a plain case of chronic hysteria. But don't flatter yourselves that hysteria is any simple malady which can be readily cured or thrown off at will. The thought of smallpox or typhoid fever strikes terror to your souls, but as a physician I say to you that chronic hysteria is infinitely worse. Helen, these paroxysms if not checked in due season, will continue throughout life, interfering with domestic responsibilities, child-bearing and child-rearing. Your hygienic, physiologic and psychologic training along right lines just now is vastly more important than a college diploma, any social prestige you may acquire, or any dowry your parents may bestow. Furthermore, is it quite fair to the splendid young man who is a suitor for your hand, that he should not know the exact nature of the attacks you are having?

"Helen, it is worth remembering that I helped celebrate your first birthday, and gave you your first spanking. And now I am giving you a mental flogging that will do you more good than the first one. The truth is, I think you so fine that I want to see how good a job I can make out of you. You have been a sort of frisky colt, frolicking around in rich pastures, kicking up your heels and doing just as you pleased. Now you have reached the age where you must get into harness and pull loads—that is the order of life if we live up to duty. The folks have not held the lines very tight. Consequently you went your own gait, balking now and then or kicking off the harness (always a serious thing in the breaking of a colt) and now they are turning the lines over to me. So it is for me to teach you how to pull the load.

"These are most serious problems for you, my dear child, which, as a real friend and a good doctor I want to help you solve in the right way. The first medicine I prescribe is to be taken before breakfast—an hour's walk, rain or shine, summer or winter. No leniency is to be shown in this matter without my consent. Secondly, the minute you find from any cause those terrible impulses seizing you to kick off the harness, make a bee-line for my office. I'll mount 'Old Bill' and you can ride Fanny—the finest saddle horse in Indiana. We'll gallop away to the country. While I minister words of encouragement and remedies to alleviate the suffering of poor old Mrs. Armstrong, dying of cancer, you can sit on the creek-bank under the trees, and profit by their wise counsel. Their leaves will whisper to you 'Patience! Patience!' They will tell you about the tedious hundred years they have been steadfastly at the job the Creator gave them to do. They will pour out the soothing balm of meditation on your fretted

nerves. Their quiet dignity and tender ministrations will build anew your hope and renew your courage to fight a good fight. O! Yes, Helen, you are going to win this battle! You have from fine parents the mettle in you to do it. All that's necessary is to get it to working properly. Your General commands. Attention! Forward march!" Then with pretended military pomp he strode over to her chair, took her shapely hand between his big ones and let out one of his rollicking laughs. He had won. No debate of the question was necessary. "Yes, doctor," said Helen, "I'll follow where you lead." And she did. Mutually faithful, doctor and patient labored years in the rebuilding of her temperamental impulses. She developed along wholesome physiologic lines into a wonderful woman. Who can measure the material price of the service this prince of physicians rendered? Compare his psychic and spiritual artistry with the mechanical technique of the operating room. Which shines with the greater luster?

Parents need instruction in the physiology and psychology of child-control and direction. They should be taught the methods most likely to attain results. Instead of parental neglect in training as illustrated by the latter example, one sees just as often the precise opposite, a nagging discipline, which is worse than no training. What is here said of parents is equally true of teachers, superintendents, the heads of great commercial and industrial concerns, managers, foremen and the like. From childhood to old age there are arising constantly these psychological and ethical problems which have more to do than aught else with efficiency and contentment in life. Is education doing all that it should in this direction? And finally may it not be contended with reason that our profession should be the leaders to show the physiologic highways along which to travel?

THE DANGERS AND DUTIES OF THE HOUR*

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The title of my address is taken from one by Dr. William Goodell, a graduate of Jefferson College, but who was for many years a professor in the University of Pennsylvania. It was entitled the "Dangers and Duties of the Hour." These today are so varied that it is impossible for me, in the few minutes that I can detain you, to take all of them into consideration; but I shall speak of a few of them.

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As we all know, there is a curious condition of unrest and lack of solidarity in the world at present. There is an existent idea that all men should get something but give nothing for it. Some men have the belief that they were born into this world to reform everybody else with the idea of standardizing everything we touch and do. Our food is standardized; our drugs are standardized; our forms of medical practice are standardized. They say we shall do this or that. They standardize our hospitals, whether in a town of five thousand, or in a city of two million inhabitants. They are saying to free-born American citizens, "If you are going to be in Class A, you must do what we say, and if you do not do what we say we will publish your name as belonging to Class B." Often you find that the instigators of these measures belong to one of two classes; they are either men who have not made a success of practice and are running off on some side line which they are free to follow, or because of some fault in their mental structure, so to speak, they go about devoting themselves to the task of trying to direct their successful brethren. They have wild ideas, and decide that the rest of the medical profession must be guided by what they say.

Long-haired men and short-haired women go to Washington and lobby. They buttonhole Senators and Representatives, and make them believe that there is a real demand for what they ask; and the Senators and Representatives pass a law to get rid of them. As a celebrated politician said, when I protested against a certain law being put through, "You do not know much about these things." I said, "I do not; but what I do know, I hate like the devil." He said, "This bill is going through, and will be signed, but the amount of money that will be appropriated to enforce it will be so small that it will not amount to anything. That will get rid of the long-haired men and short-haired women; if we do not think the bill is a good one, we do not make a large enough appropriation to enforce it," but a real danger exists, for these people are now attempting to tell us how to live while we are trying to make our living.

We find members of our profession, with great enthusiasm, many of them conscientiously believing in the correctness of their views, advocating propositions by which medical men will become mere hacks by reason of laws supposed to help the people. If we do not look out we will fall into the position of the panel doctor of Great Britain. I heard the story of a poor panel doctor in London who is paid less than one of their bus drivers. In writing a prescription for one of his poor patients, he ordered twelve capsules, but the patient took only

eight. What do you think happened? A couple of politicians that controlled that particular district called the poor fellow up before them, criticised him, tried him and finally fined him because he had put the city to the expense of putting up four capsules more than the patient needed. The men who did this were commonly known as "Bath House John" and "Hinkey Dink."

When the medical profession permits itself to resort to health centers and poor law clinics, it is being euchred out of its own. It is deceived by a star, which is going out as soon as its members try to grasp it. Group practice, which is a much more ethical procedure, is dangerous. Some of those who know the results of group practice describe it in this way: A man forms a "group" which begins to touch the borderline of non-ethics, because they are going to work as a bunch and get all the business or trade that they can, each for the other. After this has been going on for a while, the man who formed the group, and considers himself the head of it, finds that a large part of the patients are going to one of the other members of the group, because they like him better than himself. Jealousy is aroused in the group and the group falls apart. One man says that he was inadequately paid; another has failed to get his percentage; and the fourth says that the first man hogged the whole thing.

Is there anything in the practice of medicine carried on in that way? No. Practice must depend on what the man is himself. There cannot be a department store arrangement in the practice of medicine, because it is a profession and not a business. In the former you are dealing with the sick who depend on you to be human and humane, but in business the principle is *caveat emptor,* let the buyer beware.

There are other things closely related to the practice of medicine and to the great economic problems, such as the Pure Food and the Drug Act. Under the Harrison Act, they have no right to tax us three dollars a year, so they call it a license. In other words, a legitimate practitioner is taxed because he uses morphine, or other pain removing drug, for a patient who is in agony. Why not fine the life-saving squad each time it brings a man ashore? They do not use the dollars they collect for the uplift of the profession, nor do they use three hundred thousand dollars or more for the benefit of people who failed to get the morphine when they needed it. On the contrary, it is not spent for anything that has any connection with the medical profession or suffering humanity. It is a gouge, and should not be permitted. It is our fault that this is permitted.

Some of us say, "No one is interfering with us;" then suddenly we wake up and find this Harrison Act or the Volstead Act is jammed down our throat. This happens to you and it happens to me. When I wanted to get a license so that I might prescribe some whiskey for a dear old lady of ninety, on whom it acts better than anything else in smoothing the rough path of old age, I was handed a blank to fill out and told I must state whether I was an allopath or a homeopath, I said, "I am neither." The clerk said, "You must be one or the other." I said, "I am a regular practitioner of medicine. I will do anything for anybody that I think will do any good. Why should I be called an allopath? He said, "If you are a homeopath, you get a permit for sixteen gallons; but if you are an allopath, you get a permit for only three." It looks as if the homeopaths had been able to convince the authorities at Washington that like cures like, but the prohibition officer said that they use the alcohol to make their tinctures.

Where are we, that because a man chooses to call himself a homeopath, he can get sixteen gallons, and because he calls himself a regular practitioner, he is limited to three gallons? Is this a free country, under these circumstances? I think not. This is because we neglect the dangers and duties of the hour.

There is a large Chiropractic College in Iowa which graduates more chiropractors in a year than all the medical schools in the United States graduate regular physicians in a year. The other day a man, a supervisor, said that he had a boy that he thought would like to study medicine. He did not know anything about medicine. That is the trouble with the laity. They do not know anything about medicines. If you give them an ointment and it cures them, they think you are a great doctor but if you talk to them of a polymorphonuclear count, they do not know what you mean. This man made this cold-blooded proposition: He said, "I am a man with a large family, and cannot afford to spend much money for the education of my boy. I have been looking into the matter and find that if he studies medicine, it will be five or six years before he earns a dollar; but if he goes to a chiropractic place, he will make money in a year or eighteen months." It was true. There was no use in arguing with him, or saying, "You ignorant fool; your boy is probably of the same character as you, and ought to be a chiropractor."

I recently visited a town not far from here, where there was a grocery store on one corner, and a store of another kind catacornered from it. These stores were the homes of two boys who had wanted to study medicine. One boy

spent four years studying before he graduated. The other became an osteopath, and was practicing for four years before the other boy came back with his sheepskin and from his hospital service. From the standpoint of fathers, the one who became an osteopath and an early money-maker did the wisest thing. You cannot correct this view by defamation or making fun of it. You can correct it only by an educational campaign.

Now, as to the best means of opposing this danger to the people rather than to ourselves: It is not by going to the Legislature and fighting it on the ground that it is some form of irregular practice. The best method is to educate the laity, so that they will recognize that these various peculiar cults and schools never do anything except for one purpose, as has been illustrated on this stage tonight. The laity do not know that almost every man in the medical profession of the United States does fifty percent of his work for nothing, as I happen to know from the investigations that I have made. The way to combat quackery is not as two camps engaged in commercial pursuits would try to correct it, but by a process of education.

Not long ago I had an amusing experience, when a patient of mine went to the altar of a foreign god. She told me that she had been under the care of a certain osteopath, and said, "I hope you do not mind." I said, "No; the more he practices, the more I get." "Isn't that funny," she remarked, "that is just what he said about you!" I mention this joke on me because it illustrates the fact that you cannot do anything in the way of opposition except by education. A bank president in Philadelphia was told by a quack that he could cure him of cataract by reducing a dislocated spine. He does not know medicine, although he knows law. He should have enough education to know that he could not be cured of cataract without a surgical procedure. He must be educated, so that he will not be fooled.

I have been rather diffuse in my remarks tonight; but I told you when I began that the topic was a large one to cover. After all, what does this topic mean? It means that the dangers and duties of the hour require that the New Jersey State Medical Society, and every other State Medical Society, should do as this Society has done: Charge as a phalanx, and fight not only against the outsiders, but also against the small group inside.

In my opinion, the present organization of the American Medical Association has certain serious objections. In the old days, when there was a meeting, all of the men coming from a certain State got together and acted as a group representing that State, to put through such legislation for that State or the country as seemed wise. When the association got larger, it was decided that there must be a House of Delegates, and a comparatively few rule this, when you consider the number of men represented. The State of Pennsylvania has only six or seven delegates; the State of New York, nine; the State of New Jersey, three. This House of Delegates meets, and what is it made up of? It is made up always, of course, of men who are worthy members of the medical profession; but they are not usually chosen as members of the House of Delegates because they know anything about the business that is going to be transacted. On the contrary, the State Society appoints them as delegates because they are good fellows, because they are going to the meeting any way, or for some other reason. They go to the American Medical Association meeting, and do not know anything about the business to be transacted or the problems to be discussed, and somebody gets up and says that the Council on So-and-So recommends the adoption of the following resolution—perhaps that alcohol is never of value as a drug, and is always harmful (which is ridiculous, because it is untrue and it is no more deleterious than any other drug). "All in favor of this resolution, please say 'Aye'" and Dr. Jones of Rural Lake and Dr. Smith of Tunk Town shout "Aye", and it is telegraphed all over the land that the American Medical Association has passed this resolution, and that thousands of the medical profession assert as a body that alcohol is always a poison, and never of value as a drug. The newspaper does not say that a large minority voted against this resolution, or that a small majority voted for it, but it goes out as a statement of the whole medical profession, although the section made up of pharmacologists who devote their lives to the study of the action of drugs protested against such action being taken.

What then are we to do? We must at one and the same time preserve the rights of the individual and maintain the rights of the profession as a mass. While we are busy with the sick we must remember that there are others who are busy with our affairs and should be watched. There is too much influence exercised by an active small minority and too little by an inert great majority. The latter must be more active in asserting their beliefs and wishes.

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Devoted to the Interests of the Medical Profession of Indiana
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EDITORIALS

GROWING OLD GRACEFULLY

It often has been said that few medical men grow old gracefully. So many of them who have been honored by their confreres and been eminently successful in public estimation begin to show peevishness, ill-concealed jealousy, and oftentimes an all-around crabid disposition after they pass middle life but are still young enough and active enough to continue in practice. Probably this is due to what is commonly termed "slipping", and a realization that reputation and skill are not held in the same esteem as formerly by either confreres or public. Some doctors who have enjoyed a large and lucrative practice sour on the world when they discover that the volume of professional work is diminishing and patients are deserting them for younger if not more competent confreres. One may be only "as old as he feels", but there is something about the practice of medicine which makes length of service count in the appreciation of confreres as well as public in the estimation of efficiency, and whether we like it or not, or whether it is just or not, the tendency on the part of many people is to count age and length of service after a certain length of time as increasingly depreciative of efficient professional service. This is more apt to be true in those too frequent instances where the successful practitioner gets independent and perhaps tactless with advancing years and increase of reputation and practice. It really is unfortunate that so many medical men feel that they should be able to do as much and as good work in the twilight of life as they did in their prime, and it is really pathetic to see them evidence their dissatisfaction with progress of age and its attending limitations of efficiency. It is perfectly natural that the younger men should step into the shoes of the older men, and there is every reason in the world why the older men should be willing to have them do so and without any sense of regret, jealousy or antagonism. To grow old gracefully may be a difficult problem for many of us to solve, but it is worthy of serious consideration if we expect to hold the love, respect and appreciation which has been accorded us in the prime of life.

MEDICAL VERSUS LEGAL CHARITY

We have heard recently of an incident which shows the difference between medical and legal men when it comes to the exhibition of charity. A poor woman having little to keep body and soul together suffered an injury for which she received a total compensation of one thousand dollars. The physician who took care of her for the injury was asked by her attorney for a bill and the physician replied that inasmuch as the poor woman had nothing, and whatever she received as compensation would be no more than needed to support her, he would donate his services. To this the lawyer replied that there was no reason why a bill for medical and surgical services should not be rendered inasmuch as his client was receiving one thousand dollars in cash. The lawyer further volunteered the information that inasmuch as the legal bill was four hundred dollars there was no reason why the doctor should not be paid; to which the doctor answered, "Certainly if you are going to take four hundred dollars from this poor woman for the small service that you rendered I haven't the nerve to charge a cent for my services, even though I consider my services much more valuable than yours in this particular case."

Incidents of this character could be multiplied many fold. Some lawyers may be charitable in dealing with their poor clients, but such incidents are few and far between. Furthermore, when it comes to a question of fees, the lawyers have the doctors beaten a mile. A lawyer doesn't hesitate to charge anything from five hundred to twenty-five thousand dollars for writing a will for a man who is only comfortably well off, when the real work of writing the will is turned over to a salaried clerk and no particular skill on the part of the lawyer is exercised. Likewise, in defending a man in a civil suit the fee oftentimes is exorbitant, and yet whoever heard of any complaint on the part of fellow lawyers or for that matter how often does the client offer any objections? For defending a man in a criminal suit, the sky is the limit in estimating legal fees, and no hesitancy or qualms of conscience interfere with the assessment of a legal fee that perhaps takes all or nearly all that the luckless victim possesses. In comparison, if a doctor charges a mere pittance for saving a human life perhaps a howl goes up from the patient and is reiterated by some attorney who never misses an opportunity of gouging his clients. When it comes to legislation, did you ever hear of any legislation that was inimical to the interests of the legal profession? One reason for this is that many lawyers engage in politics and occupy positions in our legislative halls, but another pertinent reason is that, unlike doctors, the lawyers "stick together".

The lesson from this is that doctors should not only "stick together" but should use their voices and influence in making the public appreciate their services in dollars and cents value. Free clinics, dispensaries, and now the new uplift schemes for getting skilled medical and surgical services to the masses at nominal expense, are the factors that depreciate the value of the medical man's services. By all means let us continue our long established custom of bestowing charity when charity is due, but we should frown upon all the socialistic schemes advocated by false reformers who are proposing schemes that both pauperize the community and depreciate the value of medical services.

FIGURES NEVER LIE—BUT FIGURERS DO

Those practitioners of the healing art who maintain that all pathologic conditions, from cancer to chilblains and from soft corns to hardening of the liver, are due to subluxated vertebræ impinging on spinal nerves are republishing their annual batch of "statistics" on the chiropractic treatment of influenza. The standard advertisement runs, in part, as follows:

The Following Statistics of the 1918 "Flu" Epidemic Are Respectfully Submitted:
One of Every 16 Patients Died Under Medical Treatments.
One of Every 127 Patients Died Under Osteopathic Treatments.
One of Every 513 Patients Died Under Christian Science Treatments.
One of Every 886 Patients Died Under Chiropractic Adjustments.

These figures, of course, are evolved from the inner consciousness of those gentlemen that furnish verbal ammunition for chiropractic advertising campaigns. But, even assuming them to be correct, just what do they prove? They prove that many more people die when under the care of a physician than die when under the care of an osteopath, a Christian Science practitioner, or a chiropractor. The medical profession is perfectly willing to admit this; it is equally willing to admit that the vast majority of those who die, die in bed. Neither of these somewhat self-evident propositions, however, argues that scientific medicine is more dangerous than chiropractic, "Christian science", or osteopathy, or that a bed is a dangerous place. They do prove that most people who are sick enough to be in danger of death are usually in bed and under the care of a physician. Anyone who is familiar with the facts may admit that comparatively few people die while directly under "chiropractic adjustment", or any other of the fad "treatments". There are two outstanding reasons for this. The first is that the man who relies, for example, on chiropractic for the relief of some passing indisposition precipitately deserts this cult when he realizes that he is dangerously ill. Then he calls in a physician; should he die, he dies under "orthodox medical treatment". The second reason is that, should a patient die under "chiropractic adjustment", the law would require an inquest, as in very few states in the Union are these gentry permitted to sign death certificates. It is notorious that when the "patient" of a chiropractor becomes dangerously ill, the chiropractor urges the family to call in a physician.—*Journal of the A. M. A.*, March, 1922.

THE ST. LOUIS MEETING OF THE AMERICAN MEDICAL ASSOCIATION

The arrangements of the St. Louis profession for the meeting places for the Session of the A. M. A., which is to be held in their city May 22-26 next, are singularly fortunate and convenient; never has the Association been so well favored in this respect. The district in which the meeting is to take place is at the west edge of the business section of the city, easily accessible from all directions by street car or otherwise and not more than fifteen minutes' street car ride from the most distant hotel. The grouping of the meeting places is so compact that should one walk from the Registration Building (Moolah Temple) to the farthest hall it can be done in ten minutes or less; from section to section is a matter of from one to five minutes. The convenience of the location and arrangements of the different halls is more outstanding than in any other city in which the Association has met, and a decided improvement over the accommodations which were had at the meeting in St. Louis, 1910.

The Registration office, Post Office and Commercial Exhibit are to be in the Moolah Temple (Shrine), a beautiful and commodious building on Lindell Boulevard, two blocks west of Grand Avenue. At the other extremity of the group is the Odean, the home of the St. Louis Symphony Orchestra, with a main hall which seats better than 2,000, and several lesser halls. The main hall will be used for the opening session. Its acoustics are particularly good and suited to our purpose. The Sections on Practice of Medicine and on Diseases of Children meet here. In the assembly hall of the same building the Sections on Pharmacology and Therapeutics, and on Pathology and Physiology, will meet. (It will be noted that there has been an aim to foregather closely allied sections.) The Sheldon Memorial, a very beautiful new hall on Washington Avenue one-half block west of Grand Avenue, which most admirably meets all requirements, will be the meeting place of the Sections on Ophthalmology, and Laryngology, Otology and Rhinology. The Section on Surgery, General and Abdominal, and on Obstetrics, Gynecology and Abdominal Surgery, will be held in the Third Baptist Church on Grand Avenue, a situation well suited to the demands. The Sections on Orthopedics and Nervous and

Mental Diseases will meet in the Law School of the St. Louis University, on Lindell Avenue, a few steps west of Grand. The hall easily seats 500 and is both comfortable and convenient. Dermatology and Syphilis and Urology will use the large Union Methodist Church, on Delmar Avenue just west of Grand, which meets every requirement. The Sections on Gastro-Enterology, Proctology and on Preventive Medicine will use the large hall in the Musicians' Club on Pine Street, east of Grand Avenue, and next to the building of the St. Louis Medical Society, where the House of Delegates will hold its sessions. The Section on Stomatology is assigned to the assembly hall of St. Peter's Parish House, one block west of Grand on Lindell. Immediately in this district will be found three of St. Louis's most important clubs, the St. Louis, University and the Columbian. Restaurants catering to every grade of patronage are numerous in the district and precautions have been taken to insure that normal rates continue during the meeting.

The St. Louis profession is preparing for an unusual attendance; hotel reservations are coming in rapidly, but it is purposed that even the late comer shall be comfortably housed. The wise traveler, however, makes his reservation as early as he finds it possible. Dr. M. B. Clopton, 3525 Pine St., St. Louis, is Chairman of the Committee on Sections and Section Work.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

ANY physician who desires to present a paper before the Surgical Section of the Indiana State Medical Association at the Muncie session, September 27 to 29, should communicate promptly with Dr. H. W. McDonald, Newcastle, secretary of the Section.

THE little town of Stanford, Monroe county, situated in the center of a wide, unopposed territory, is without a physician, and the citizens are asking assistance in securing a good doctor for that community. Any doctor interested should address C. R. Young, Stanford, Indiana.

IT is not too early to remind those who desire to present papers at the Muncie Session of the Indiana State Medical Association that the program committee is now looking for contributions. Inasmuch as papers are divided among the three sections and the general meeting, contributors are requested to write the secretaries of the sections.

ACCORDING to the February 15 issue of the Western Christian Advocate, Christian Science quarrels are disrupting the erstwhile pacific society. The net earnings of the publishing company have fallen from a profit of $500,000 a year to a loss of $20,000 a month. *The Christian Science Monitor* has lost 80 percent of its circulation. Mrs. Eddy is no longer here to compel obedience, and so the autocratic organization breaks up.

IN the roll of honor of the United States representatives who voted *against* the Sheperd-Towner bill we can place the names of Merrill Moores, of Indianapolis, and Milton Kraus, of Peru. They deserve the thanks of the thinking element in the medical profession. These men, with the exception of William R. Wood, of Lafayette, who did not vote, are the only ones out of thirteen Indiana congressmen who did *not* vote for the Sheperd-Towner bill.

THE medical profession is honored in the appointment of one of its members to the President's Cabinet. Dr. Hubert Work, President of the American Medical Association, who has been serving as assistant postmaster general during the present administration, and has now been appointed Postmaster General, is the first physician thus honored since Dr. James McHenry served as Secretary of the War in the cabinets of Washington and Adams. Dr. Work is eminently capable of filling the position in which he has been placed.

THE Public Health and Social Welfare Committee of the Massachusetts Legislature has voted unanimously to report adversely on accepting the Sheperd-Towner law. It is expected that other states will take a similar stand, and it is not too early for the medical men of Indiana to think of having this state reject a law that is iniquitous in effect and is not at all in the interests of maternity. If adopted it means increased taxation without corresponding benefits. Its main provision is to give jobs to a lot of office parasites.

WE desire to call attention to the "Ten Commandments of Medical Ethics" formulated by Dr. Frank B. Wynn, of Indianapolis, and published in the February number of THE JOURNAL. Complying with the request of numerous friends, Dr. Wynn has had these ten commandments artistically printed in colors and handsomely illuminated by a specially designed border illustrating the history of medicine in symbols. This reproduction is suitable for framing, size seventeen by twenty-two inches, and the price, postpaid, is two dollars, which may be sent to F. E. Dillan, publisher, 817 Hume-Mansur Building, Indianapolis. These commandments are worthy of a place on the wall of any physician's office. They are a good reminder to the physician of how he should conduct himself, and they also are a good reminder to the lay person as to the aims and objects of medical practice as conducted by the honorable and ethical physician.

"Watch your step!" is an injunction which should be well considered by some of the leaders in our medical profession who intentionally or otherwise are giving their support to various uplift schemes which in the ultimate analysis mean the socializing of the practice of medicine. Free hospitals, free clinics and a dozen or more allied plans for furnishing free medical and surgical service to the public are receiving more or less support from some medical men who later on will live to regret the action, but who at the present time deserve the severest condemnation of their confreres for an action that tends to pernicious results. This whole tendency to socialize the practice of medicine has been insidiously but steadily growing during the last few years, and the pathetic feature of the matter is that much of the movement has been supported and sometimes instigated by medical men probably without thought as to the ultimate vicious results. Already a storm of disapproval is coming up from the rank and file of the medical profession, and those who intentionally or unintentionally would destroy private medical practice as it exists today will be opposed most vigorously.

THE Board of Trustees and the Judicial Council of the A. M. A. have taken notice of the open letter addressed to the County Medical Societies by a so-called "medical advisory committee" by issuing a statement in which they admit that at present there is great need of calm, deliberate consideration of how best to check cer tain dangerous tendencies affecting the practice of medicine, and to remedy serious conditions that already exist. They condemn the communication as being destructive in character, but admit the need of suggestions as to the best method of combating the evils that threaten public and professional welfare. As a matter of fact reforms are seldom brought about without calling attention to the need of such reforms. Pointing out evils that exist is not destructive, and pointing out the dangers of innovations that are proposed should not be considered a breach of propriety. In the medical profession we are too prone to let a few do the thinking for us, and those few oftentimes are too apt to take offense if either their motives or their actions are questioned. Anyway, the subjects which have brought forth discussion are worthy of serious consideration and no doubt much will be accomplished that would not be accomplished were it not for the agitation that has been started by a few men who now are not in particularly good favor in the eyes of some of those who at present rule the destinies of the American Medical Association.

THE newspapers announce that Dr. William J. Mayo, the celebrated surgeon of Rochester, Minnesota, is building a palatial combined yacht and houseboat, with facilities for entertaining numerous friends and with special arrangements for housing and unloading a sufficient number of automobiles to entertain the party when stops are made. Some newspaper writers have remarked that "it pays to practice medicine", but we can assure them that doctors who own private yachts are almost as scarce as hen's teeth. However, why shouldn't the wizards of the medical profession own yachts the same as those who are successful in other vocations? It is a little unfair to jump on medical men continuously because in rare instances they happen to acquire a little property or even put forth an effort to get what is justly due them in compensation. The reason for this is not hard to find, for from time immemorial doctors have been an easy going class, content to relieve suffering humanity with scarcely a thought of reward except that which goes with the knowledge of doing good. The Mayos have been good business men as well as good surgeons. They have exacted toll where toll was due, but, on the other hand, they probably have shown as much if not more of the milk of human kindness as the average doctor. Some of us can never obtain their present position in the financial and medical world but we are not going to criticize or be jealous because they have been more successful. We are only sorry that there are not more men in the profession who have their business as well as surgical ability.

DR. ROYAL S. COPELAND, health commissioner of New York City, has been brought into the limelight through a statement in the lay press attributed to him in which he asserts that our "moss covered" code of ethics should be revised, and his reason for the opinion apparently is

founded upon the failure of most of the reputable medical men of New York City to sanction the spectacular work of Professor Lorenz whose reputed philanthropic purposes are open to serious question. At all events the lay press has seized upon the incident as ground for criticism of the medical profession. Some of our Indiana newspapers have taken up the subject, and the *Indianapolis Star* says that "the promotion of the field of the profession as a whole is blocked by the jealousies of the individuals and the cliques within it. * * * There is a great deal of suspicion that a considerable part of the adherence to the 'antiquated' ethics is due to the selfishness of certain members of the profession who care little for the general welfare." Fortunately there are some editors of lay publications who appreciate the reasons for a code of ethics which provide reasonable rules of conduct for medical men, and realize that there is nothing in the code which is inimical to scientific and honorable conduct, and the strictest adherence to conscientious service to suffering humanity. There is nothing really wrong with our code of ethics. The trouble lies with those who for selfish purposes or to sanction unworthy motives in others are quite willing to break the code of ethics and condemn its principles. What we need most of all is a rejuvenation of the code of ethics. The code is just as good and just as applicable now as when first formulated.

BENJAMIN F. BLEDSOE of California, judge of the United States District Court, makes some very pertinent statements concerning the doctor and the Eighteenth Amendment in the January 19th number of the *Bulletin of the Los Angeles County Medical Society*. They should be of interest to every physician in Indiana, and we are publishing them herewith:

Doctors as a class are an ennobled lot. Unreservedly they have consecrated themselves to the highest form of service—service in alleviation of human misery and distress. The new life they usher in; the old life they perhaps prolong; to every life they afford comfort and hope. Whether they are the first reliance or the last resort, they come at our request, prepared for any emergency, ready for any responsibility. The slender thread of life is committed unhesitatingly into their hands; to them we confidently expect the hidden to become the open book. In our anxiety their knowledge becomes an inspiration, their presence a benediction, their skilful ministrations the sure precursor of relief and rest.

But there are those who would turn these men into an organization of mere bartenders, and at that bartenders operating in defiance of law.

By Constitutional mandate, fortified by appropriate Congressional enactment, the use of intoxicating liquors for beverage purposes is absolutely prohibited throughout the United States. Their use for medicinal purposes, pursuant to appropriate regulations, is preserved. To any doctor who really believes that intoxicating liquors possess substantial therapeutic properties, the way is now open, and probably always will be open, in strict conformity to law, to make use of such instrumentalities.

But there is no law, no code of professional ethics, no necessitous condition of the human system and no possible or plausible excuse offering justification for a self-respecting physician to evade, circumvent and deliberately violate the law of the land by providing liquor for a person as a beverage when in truth he does not need it as a medicine.

The simple question now being propounded to the medical profession of America is this: Will you continue to minister to a man's highest needs and thereby share his gratitude and his respect, or will you prostitute your high privileges and pander to his depraved appetite merely that you may get some of his ill spent money?

THE people of Colorado are to be called upon, at the fall election, to vote upon the prohibition of vivisection. The ballot will contain the following caption: "An Act to Prohibit Injurious, Dangerous or Painful Experimental Operations or Administrations Upon Human Beings or Dumb Animals Except to Relieve or Cure Them; Making Exceptions of Persons Consenting to Such Experiments and Providing Penalties for Violations of the Act." "Yes———. No———.", and the unwary voter will be at a disadvantage, for the ballot contains no explanation, but simply appeals to the spirit of mercy. The bill is, of course, the work of the anti-vivisectionists, of which there are now ten societies in the United States, the newest one being the Colorado organization. The parent society seems to be the New York Anti-Vivisection Society—an organization that makes a pretense of mercy and human kindness in order that it may wage propaganda against the medical profession. From the literature which emanates from this Society it is very evident that it is controlled by the drugless practitioners. Some of the pamphlets—in fact many of them—have no reference to vivisection, as will be noted by the following titles: "Shall We Let the Doctors Enslave Us?", "Complete Failure of Medicine in the World War", "Dangers in the Use of Vaccines and Serums", "The Folly and Failure of the Old School Serum-Vaccine Method Versus the Glorious Record of Drugless Doctors in the Influenza Epidemic", "What Would Have Happened Without Osteopathy?", "What Would Have Happened Without Chiropractic?", etc., etc. It is enlightening to note that some of these pamphlets were written by the president of the National Association of Drugless Practitioners. Indiana may, in the none too distant future, be called upon to face just what Colorado is now facing, and Indiana physicians should be making it their business to acquaint the laity concerning the fanaticism, deceitfulness and fraud of these "uplifters" known as anti-vivisectionists.

IN different parts of the country and especially in the East and Middle West, the various uplift schemes proposed by erstwhile leaders of

the medical profession are coming in for not only criticism but severe condemnation. This includes Compulsory Health Insurance, the Sheperd-Towner bill, lay domination of hospitals and the fixing of medical fees by lay persons, community and other clinics under federal, state or municipal control and a number of other Utopian and socialistic ideas which have either been advocated or permitted to become prominent through lack of opposition. Much criticism has been directed toward several of the A. M. A. officers who openly or tacitly have been supporting one or more of these various uplift schemes which, in the ultimate analysis, must prove detrimental to medical profession and public alike. However, some of the A. M. A. officials do not take kindly to criticism and are using the whole machinery of the A. M. A. office to not only voice their disapproval but to discredit the efforts of those who would oppose them. In fact they are trying to make the rank and file of the profession believe that those who dare to criticize officials of the A. M. A. who so long have told us how to act and even how to think, are proposing destructive programs and that their complaints are altogether unworthy of serious consideration. The A. M. A. bosses cry loudly for a *constructive* program when, as a matter of fact, all that is being offered by the opposition is a criticism of a really *destructive* program that has met with considerable favor and support on the part of leaders who ought to be against such socialistic and paternalistic measures as have been offered. Most of the numerous schemes that have been offered and to which the so-called "insurgents" are opposed are positively vicious in their tendencies and cannot help but work harm to the medical profession and to the public as well. They are socialistic and paternalistic in character and we want none of them. The discussion of the subject cannot be stopped by discrediting the men who are opposed to these schemes to socialize medicine, and the A. M. A. officers may find to their sorrow that in using the entire machinery of the A. M. A. to fight openly or by inference the work and opinion of these insurgents is bad policy. Some men get very much peeved if opposed or if anyone disagrees with them. We are confronted with the sins of omission as well as commission on the part of the leaders in our medical profession. We have a right and it is even our duty to oppose those leaders and their plans. The matter is deserving of serious consideration and is not going to be settled by resort to subterfuge, personal abuse, or unfair insinuation on the part of those who are in power in the A. M. A.

A CAMPAIGN is on to raise funds for the Riley Memorial Hospital. Newspapers and solicitors announce that the hospital is to be free to any and all of the children of Indiana. If this means that medical and surgical services are to be free to rich and poor alike, then it is time for medical men and all others interested in fair play and in maintaining the self-respect of all citizens of the state to offer their opposition to the movement. From the first we have had a suspicion that the Riley Memorial Hospital would be a State institution, under State control (probably a lay board), with its policies dictated by lay individuals and its services open to rich or poor on the same terms and, as usual in such schemes, the medical men are the "goats", to say nothing of the tendency to pauperize communities. The worst of this feature is that some of our prominent medical men are said to be responsible for the scheme. If the Riley Memorial Hospital is another link in the chain of evidence which shows the drift toward socializing the practice of medicine then we probably have members of the medical profession in part responsible for the condition. We heartily favor the establishment of the Riley Memorial Hospital, open to any children of the State, but on the distinct understanding that those able to pay shall pay for the services rendered and the fee shall be in keeping with the ability of the patient to pay. There is absolutely no excuse for the establishment of a hospital under State control that furnishes *gratuitous* medical and surgical services to all who come. It is wrong in principle and will prove itself wrong in practice. The Indiana State Medical Association at its last session very properly passed a resolution favoring the establishment and maintenance of the Riley Memorial Hospital for the treatment and care of *indigent* children of the State. In reality it is the indigent children that need such an institution, for the well-to-do are able to secure such attention at any of our good hospitals and under the care of competent physicians and surgeons, whereas the latter institutions, except under very limited conditions, are not patronized by the poor, probably because of the implied obligation that the service and care is to cost something even though but a nominal sum. By all means let us care for the indigent children of Indiana and in the best manner possible, but while we are doing that we should not place the able to pay patients on a charity basis, thus creating the tendency to loss of self-respect and a general pauperization of the community. This is not a selfish argument in favor of members of the medical profession, even though medical men have a right to fight for their economic existence the same as anyone else, but it is a plea for a logical disposition of the matter with the best interests of both the public and the medical profession in view.

FROM the March number of the *Illinois Medical Journal*, we copy some correspondence and comments of the editor:

WAS IT A GREAT DAY FOR MICHIGAN DOCTORS?

January 20, 1922.

To the Editor:

We certainly had some meeting at Detroit. On Tuesday evening from six to one o'clock a. m. we mauled things over at the Detroit Athletic Club, and it was some hot session. We telephoned that President Burton of the University, Hugh Cabot and others could be present at the Councilors' meeting the next day. They were obliged to get up long before daylight and drive sixty miles in order to be present at our meeting at 8:30 in the morning. It was a case of Mohammed coming to the mountain instead of the mountain going to Mohammed. They brought the peace dove with them.

President Burton and Dr. Cabot said that they wanted to be with us, that they are against State Medicine, Compulsory Health Insurance, Community Hospitals, etc. They said further that through the extension service of the University they will deliver lectures all over the state of Michigan on what general medicine has done in the past, what it is doing at present and what it will do in the future: that they will not say a word against any cult or sect, which I think is very wise.

It is my belief that January 11 was one of the greatest days for medicine in the state of Michigan for many years. I am thoroughly convinced that the victory that the State Medical Society obtained over the University the other day at Detroit is largely due to the work of yourself and Dr. Bulson of Indiana. I wish that you would congratulate Dr. Bulson for me. H. W. A.

Note and Comment:—Evidently some of the Michigan doctors feel that Burton and Cabot, *et al.*, have abandoned their former socialistic plans. Like the Scotchman, "I hae me doots". The leopard cannot change his spots; we are from Missouri and in this case have to be shown. All our life we have been watching the performance of medico-politico acrobats, jugglers, trained seals and tight rope walkers, and we feel that we are perfectly competent to recognize such performers when we see them.

Burton and Cabot have not reformed. At the meeting referred to above they camouflaged and sidestepped completely the fact that in the past they have been advocating socialized medical schemes, such as community clinics which they proposed, which would be a direct step toward placing the practice of medicine in Michigan under state control.

We believe with Dr. Albert E. Bulson, Jr., editor of the *Journal of the Indiana State Medical Association*, in his analysis of the Michigan proposition, when he says "that the community clinic which they proposed would be a direct step toward placing the practice of medicine in Michigan under state control. In fact, they boldly stated that these clinics in various sections of Michigan were to be conducted and controlled by the University, the latter of course being under state control. Just what the medical men of Michigan are thinking of to let the University of Michigan pull off a stunt of that kind is more than I can understand. Furthermore, if the University of Michigan, as avowed in their statement just published, is to confine itself to teaching, why in the name of heaven have they arranged for enormous hospital facilities far beyond the needs of teaching purposes? There is a 'joker' in the whole program and the medical profession of Michigan may wake up when it is too late."

The Indiana State Journal passes the remark: "At last Michigan is Waking Up." Humph, strange how, when one is stretching and yawning and trying to become accustomed to the light of a new day, even though it is 11 a. m., that he labors under the impression that the rest of the world is just rising with him. Michigan has been awake many hours, Indiana. It has passed the early stage of criticism and fault-finding and is attempting to offer something that is constructive. Shake-a-leg, Hoosier brother; catch up with the crowd and let us have the benefit of your constructive advice. Let us have your aid in remodeling and revamping. What have you to offer?—*Journal Michigan State Medical Society*, March, 1922.

The above refers to our editorial note in a recent number of THE JOURNAL in which we called attention to what seems to be an awakening of the medical profession of Michigan to the dangers of socialized medicine as proposed and to an extent carried out by the University of Michigan, and by inference criticized by the editor of the *Journal of the Michigan State Medical Society* in recent numbers of his journal. We desire to remind our brother editor in Michigan that he was *not* awake when he permitted the University of Michigan to propose, months ago, some socialistic schemes which at that time he never criticized or opposed so far as we know. It was only after we complained about these socialistic schemes because both directly and indirectly they affected the whole medical profession, and the complaint was reiterated by prominent members of the medical profession of Michigan and elsewhere, that the editor of the *Journal of the Michigan State Medical Society* began to wake up. We are not quite satisfied that even yet he is awake, for unless we are badly mistaken he has been hypnotized by what apparently is a "turn about face" on the part of the authorities of the University of Michigan. However, as the editor of the *Illinois Medical Journal* says in commenting on the same subject, "I hae me doots" about the change of heart of those who have been advocating schemes that ultimately would annihilate private medical practice. It is a little amusing to hear those who have been criticized complain about fault-finders and ask for something *con*structive. Why, bless your soul, brother, we are busy enough right now trying to head off *de*structive and vicious measures that have been either advocated or supported by some of the leaders in

the medical profession, and in evidence we mention Compulsory Health Insurance, the Sheperd-Towner Bill, lay domination of hospitals and medical fees, and, last but not least, the effort to establish community clinics under state control—a most vicious project having inception in the minds of the authorities of the University of Michigan, publicly advocated and never receiving one word of disapproval from you until this Journal commented upon the matter. A *con*structive program will come soon enough when we pry some of you fellows loose from various uplift schemes that threaten the destruction of the private practice of medicine. Catch up with the crowd! Lord bless you, brother Editor, we don't want to catch up with a crowd that is trying to foist state controlled community clinics upon us unless to "catch up" gives us an opportunity to change the course of those who are leading themselves as well as the rest of us into danger.

DEATHS

SAMUEL A. KENNEDY, M.D., died at his home in Indianapolis at the age of 92 years.

WILLIAM H. BANKS, M.D., died at his home in Waymansville, March 2, at the age of 84 years.

HENRY W. JONES, M.D., died March 3 at his home in Spiceland. Dr. Jones graduated from the Cincinnati College of Medicine and Surgery in 1875.

W. N. WILLIAMSON, M.D., died Tuesday, February 21, at his home in Indianapolis. Dr. Williamson graduated from the Medical College of Indiana, Indianapolis, in 1880.

WILLIAM P. KOCHENOUR, M.D., died at his home near Rego at the age of 74 years. Dr. Kochenour graduated from the Hospital College of Medicine, Louisville, Kentucky, in 1884.

OLIVER F. GRAY, M.D., of Spencer, died recently after a short illness. Dr. Gray graduated from the Indiana Medical College, Indianapolis, in 1878. He was a member of the Owen County Medical Society and the Indiana State Medical Association.

SAMUEL M. VORIS, M.D., died February 21, 1922, at his home in Columbus, aged seventy-six years. Dr. Voris was a graduate of the Jefferson Medical College, of Philadelphia, and was a member of the Bartholomew County Medical Society and the Indiana State Medical Association.

CHARLES C. GIVENS, M.D., aged 72 years, died as the result of an accident when his automobile was struck by a train. Dr. Givens graduated from the Louisville Medical College in 1882 and was a member of the Vigo County Medical Society and the Indiana State Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

THE Decatur County Medical Society held a banquet at Vevay, February 16.

DR. R. F. BLOUNT, of Wabash, celebrated his ninety-first birthday February 12.

DR. JOSEPH H. CASPER has opened an office in the Steinkemp Building, Jasper.

DR. W. T. LAWSON was elected Health Commissioner of Hendricks County in January.

THE Lawrence County Medical Society held its regular meeting at Mitchell, February 1.

DR. W. F. BUTLER, of Cayuga, was injured when he fell down a flight of steps February 9.

A WARD for colored patients is to be added to the Irene Byron Tuberculosis Hospital, Fort Wayne.

DR. D. R. GOOD, of Boggstown, has removed to Newport, where he will take up the practice of medicine.

DR. MILES F. PORTER, SR., of Fort Wayne, has been made a member of the Indiana State Anatomical Board.

DR. M. MAY ALLEN has been made assistant director of the child hygiene division of the State Board of Health.

THE Putnam County Orphans' Home at Greencastle was destroyed by fire, the loss being estimated at approximately fifteen thousand dollars.

THE Elkhart County Medical Society held its annual meeting at South Bend, February 4. More than one hundred physicians attended the meeting.

DR. J. H. ALLEN, of Patricksburg, has purchased the office and home of Dr. Black at Fishers and will locate there for the practice of medicine.

DR. HENRY LOGAN, of Rushville, was injured February 20 when the automobile in which he was riding was struck by a train. The injuries were not serious.

THE Orange County Medical Society held a meeting February 7 at Orleans. A paper was presented by Dr. Wilson on "Vaccines and Organo-therapy".

DR. RAYMOND STENGER, of the medical staff of the National Military Sanitarium, near Marion, and Miss Inez Worley, of Marion, were married February 9.

DR. LOUIS A. BOLLING, of Attica, has accepted a position with the government and will be stationed at the clinic for veterans of the World War at Washington, D. C.

THE annual meeting of the Daviess-Martin County Medical Society was held February 22 at Washington. Dr. W. H. Foreman, of Indianapolis, presented a paper.

THE Madison County Medical Society held its meeting at Anderson, February 22. A paper on "Non-Infectious Diseases and Anaphylaxis" was presented by Dr. W. H. Miley.

THE Marion County Medical Society held a meeting at Indianapolis, February 26. Dr. E. E. Rosenow, of the Mayo Clinic, presented an illustrated lecture on "Focal Infections".

THE death rate of New York State for the year 1921 is the lowest ever recorded for it, being 12.2 per thousand of population. The rate in 1920 was 13.8, and in 1914, 14.7.

PLANS have been approved by the Lake County board of commissioners for a modern county tubercular sanitarium to be situated on a 120 acre tract of land near Crown Point.

A CAMPAIGN has been started to raise $350,000 for the building of a 100-room wing, contagious department, and a nurses' training school at St. Elizabeth's Hospital, Lafayette.

THE Huntington County Medical Society held its annual banquet February 7 at Huntington. Papers were presented on "Dislocation of the Shoulder Joint", by Dr. W. C. Moore, and "Treatment of Cancer", by Dr. B. F. Kirkland.

THE Wells County Medical Society held a meeting at Bluffton, February 21. Dr. E. E. Morgan, of Fort Wayne, presented a paper on "Pruritis Anis" and Dr. W. D. Calvin, of Fort Wayne, read an article on venereal disease.

DR. GEORGE T. MCCOY, of Columbus, has been made president of the Indiana Tuberculosis Society to succeed Dr. Eric Crull, of Fort Wayne, at the closing session of the eleventh yearly conference in Indianapolis.

ARRANGEMENTS have been made by Goshen physicians and the management of the Goshen Hospital Association to purchase an x-ray equipment at a cost of $3,500, which will soon be installed in the hospital.

A JOINT meeting of the Bartholomew and Jackson County Medical Societies was held February 2 at Seymour. Dr. A. G. Osterman, of Seymour, presented a paper on "Pneumonia and Its Treatment".

THE Clinton County Medical Society held its regular monthly meeting February 2 at Frankfort. Dr. W. C. Mount, of Kirklin, presented a paper, the subject of which was "Early Diagnosis and Treatment of Surgical Cases".

THE Kosciusko County Medical Society held its regular monthly meeting January 31, at Warsaw. A paper on "Control of Venereal Diseases" was presented by Dr. J. G. Royse, of Indianapolis.

A BOND issue of $150,000 for the construction of additional hospital facilities at the Marion County Hospital for the Insane at Julietta was approved by the Marion county council at a recent meeting.

Archives of Occupational Therapy is a new periodical, the official organ of the American Occupational Therapy Association. It is edited by Dr. William R. Dunton, and will be published bimonthly.

DR. F. W. CREGOR, of Indianapolis, announces that he has associated with him Dr. F. M. Gastineau, formerly of Bellevue and New York Skin and Cancer Hospitals, in the practice of dermatology and allied conditions.

THE annual meeting of the Children's Aid Association was held in Indianapolis February 13. Dr. C. C. Carstens, of New York, director of the Child Welfare League of America, spoke on "Newer Movements in Child Welfare".

DR. HUBERT WORK, President of the American Medical Association, who has been serving as assistant postmaster general during the present administration, has been promoted to postmaster general to succeed Mr. Hayes, resigned.

THE regular meeting of the Muncie Academy of Medicine was held Friday, February 10. A paper on "Early Signs of Neuro-Syphilis" was presented by Dr. L. D. Carter, of Indianapolis, and Dr. C. A. Ball presented a paper on "Infant Feeding".

THE Delaware-Blackford County Medical Society held its regular meeting at Muncie, February 3. A paper was presented by Dr. William Engleboch, of St. Louis, on "Diagnosis and Treatment of Disorders of the Endocrine Glands".

DR. B. D. MYERS, of Bloomington, has been made a member of a committee of the Association of American Medical Colleges which is to draft a course of study that will serve as a basis for the curriculums of the leading medical schools of the United States.

PROF. VERNON LYMAN KELLOGG, zoologist and secretary of the National Research Council, Washington, D. C., and John W. Davis, attorney, New York City, formerly ambassador to Great Britain, have been elected trustees of the Rockefeller Foundation.

THE next meeting of the Northern Tri-State Medical Association will be held at Ann Arbor, Michigan, Tuesday, April 11. The number of papers to be presented has been limited that the program will not be crowded. The University is arranging some excellent clinics for the morning session.

DR. K. K. WHEELOCK, of Fort Wayne, will sail from New York on March 21 to visit Italy, Australia, Germany, Switzerland, France, England, Scotland, Belgium and Holland. Dr. Wheelock will visit his daughter, who is in Sicily, and expects to take up special study of the eye, ear, nose and throat in Vienna.

IT has been announced that the General Education Board of the Rockefeller Foundation has appropriated during the last fiscal year $18,210,353 for colleges and universities, $12,029,513 for medical schools, and $646,000 for negro education. Since its establishment in 1902 this Board has appropriated $89,017,872.

ARRANGEMENTS have been completed for a health exposition to be held at Indianapolis in May. Exhibits will be presented by more than one hundred health educational organizations throughout the United States. The exposition is an outgrowth of the Indianapolis Public Health Institute which was held February 13-18.

WESTERN RESERVE UNIVERSITY is the recipient of a gift of a sufficient amount of money, from Samuel Mather, to erect new medical school buildings which are to be "the finest in the country". No amount is specified in the gift, but the architect's estimate calls for approximately $2,530,000. Construction is to be begun this spring.

THE regular monthly meeting of the LaPorte County Medical Society was held February 10 at the LaPorte Y. M. C. A. Dr. Burton Haseltine, Professor of Head Surgery, Hahn Medical College, presented a paper on Sinus Infections, the discussion of which was led by Drs. H. L. Brooke and M. S. Smith. Clinical cases were presented by local members of the Society.

INFLUENZA statistics for the first six weeks of 1922 show a greater number of cases of this disease than a similar period last year, but the present situation is not at all comparable to conditions existing in 1919-1920. For the first six weeks of 1922, 28,075 cases of influenza were reported in 24 states; for 1921, in 22 states, there were 4.143 cases; and for 1920, in 23 states, there were 477,289 cases.

DR. FREDERICK R. GREEN, who has been connected with the headquarters office of the American Medical Association since the year 1905, and has served as secretary of the Council on Health and Public Instruction since its organization in 1910, has resigned, the resignation taking effect on March 31. Dr. Green has formed a partnership with Dr. C. St. Clair Drake and Dr. John Dill Robertson for the publication of *Health*, a popular monthly magazine.

UNDER an executive order recently issued by President Harding, surplus medicines and medical, surgical and hospital supplies held by the War, Navy and Treasury departments and the Shipping Board will be made available for the Russian relief. The supplies will be delivered to the American Relief Administration within four months' time, and will not exceed $4,000,000 in original cost to the Government. The relief association is authorized to make the distribution of the materials through its own agencies or those of other relief organizations operating in Russia which may be found in a better position to distribute the supplies to centralized localities.

DURING February the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Persson Laboratories—Bacillus Coli Antigen (No. 50)-Persson, Furunculosis Vaccine Mixed (No. 37)-Persson, Gonococcus Antigen (No. 47)-Persson, Staphylococcus Aureus Antigen (No. 49)-Persson, Streptococcus Antigen (No. 48)-Persson, Pneumonia Vaccine (No. 36)-Persson. Powers-Weightman-Rosengarten Co.—Novarsenobenzol-Billon. G. H. Sherman—Whooping Cough Vaccine-Sherman, Mixed Typhoid Vaccine-Sherman, Acne Staphylococcus Vaccine-Sherman. Winthrop Chemical Co.—Alypin.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District Councilor	Number of Counties	1921 Membership	1922 Membership to Date	Percentage
First—Dr. Willis	7	176	159	.90
Second—Dr. Schmadel	7	149	128	.86
Third—Dr Leach	9	130	104	.80
Fourth—Dr. Osterman	10	138	132	.95
Fifth—Dr. Weinstein	5	158	146	.92
Sixth—Dr. Spilman	8	150	147	.98
Seventh—Dr. Earp	4	425	377	.89
Eighth—Dr. Conrad	5	172	138	.80
Ninth—Dr. Moffit	10	253	234	.93
Tenth—Dr. Shanklin	5	151	112	.73
Eleventh—Dr. Black	6	191	178	.93
Twelfth—Dr. Morgan	8	241	206	.86
Thirteenth—Dr. Berteling	8	274	243	.89
	92	2608	2304	

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

BUTYN, A NEW SYNTHETIC LOCAL ANESTHESIA.—A committee of the A. M. A. Section on Ophthalmology reports to the Council on Pharmacy and Chemistry on the clinical use of butyn in operations on the eye, nose and throat. The committee finds butyn preferable to cocain as an anesthetic in operation on the eye. One member of the committee also reports favorably on its use in operations on the nose and throat. As a result of the clinical and experimental use of butyn, the committee arrives at the following conclusions: 1. It is more powerful than cocain, a smaller quantity being required. 2. It acts more rapidly than cocain. 3. Its action is more prolonged than that of cocain. 4. According to our experience to date, butyn in the quantity required is less toxic than cocain. 5. It produces no drying effect on tissues. 6. It produces no change in the size of the pupil. 7. It has no eschemic effect and therefore causes no shrinking of tissues. 8. It can be boiled without impairing its anesthetic efficiency.—(*Jour. A. M. A.*, Feb. 4, 1922, p. 345).

WILLARD EALON OGDEN, SPECIALIST IN PROCTOLOGY.—Dr. Willard E. Ogden, Chicago, claims to be a specialist in proctology, author of "Improved Method of Treating Rectal Diseases", to have been associated with the leading proctologists of America, and to have developed a method of office treatment which is not taught by any other practitioner. He offers to instruct physicians in his methods. In 1914 Ogden advertised in Chicago newspapers to cure piles. In 1921 Ogden had a copyrighted mail-order course of the treatment of rectal diseases by improved methods. Careful search fails to disclose that Dr. Willard E. Ogden has ever distinguished himself in the practice of specialties in which he now wishes to instruct physicians, that he has never published a paper on any phase of medicine or surgery, or that he has been associated with the leading proctologists of America.—(*Jour. A. M. A.*, Feb. 4, 1922, p. 368).

MERCURIC CACODYLATE.—As cacodylates have been found practically worthless in the treatment of syphilis, mercuric cacodylate must be considered as merely an administration form of mercury. It contains but one-half as much mercury as mercuric salicylate. The two preparations cannot be compared with each other as to local or general action for the reason that the cacodylate is soluble while the salicylate is practically insoluble. The cacodylate has to be administered daily to maintain adequate action. Mercuric salicylate is a favorite drug because of the argument that, being insoluble, it forms a depot of mercury in the tissues so that a week's dose may be administered at one time. To keep the patient under as continuous mercurilization as would be secured by the ordinary dose of 0.10 Gm. of mercuric salicylate given once a week, six doses of 0.04 Gm. of cacodylate would have to be given: in other words, a daily dose excepting Sunday. The pain and induration induced by mercuric salicylate is the price the patient must pay for the convenience of weekly administration.—(*Jour. A. M. A.*, Feb. 11, 1922, p. 452).

STYPTYSATE NOT ADMITTED TO N. N. R.—Styptysate, according to the advertising of Ernst Bischoff Co., Inc., is "obtained by dialysis from Bursa Pastoris (Shepherd's (sic) purse)". It is claimed to be "The Remedy for Hemorrhages", to be "Superior to Ergot and Hydrastis", "of particular advantage in Menorrhagia and Metorrhagia" and to have been "found of great value in vesicle hemorrhages and hemorrhages from mucous membranes in general". According to the label, Styptysate is "made in Germany", but the name of the German manufacturer is not given. According to German publications, a proprietary called Styptysate and made from shepherd's purse—a common weed—was used in Germany as a substitute for ergot when this drug was not obtainable. On the assumption that the product discussed in German publications is the Styptysate marketed in the U. S., the best that can be said for it is that, during a shortage of ergot, it was used in place of that established drug. The Council on Pharmacy and Chemistry reports that Styptysate (Ernst Bischoff & Co., Inc.) is inadmissible to New and Nonofficial Remedies because its composition is semisecret and indefinite, and there is no evidence that its uniformity and strength is controlled; further, it is inadmissible because the therapeutic claims advanced for it are exaggerated and unwarranted and because there is no evidence that it possesses any advantage over established drugs, such as the biologically standardized fluidextract of ergot or the definite ergot preparations admitted to New and Nonofficial Remedies.—(*Jour. A. M. A.*, Feb. 11, 1922, p. 450).

IRON THERAPY.—Iron has so long been administered in some form or other in the treatment of anemia that one might well suppose that its function in the regeneration of blood had been clearly determined. This is far from being the case. Last year, Whipple and his associates reported that iron given as Blaud's pills had no influence on the rate of blood regeneration in secondary anemia produced in animals. They reported that there is some experimental evidence for the administration of blood in secondary anemia, but state that whole red cells or hemoglobin given by mouth in the form of a dry powder do not appear to influence profoundly the blood regeneration curve. Their experiments show that hemoglobin has a distinct influence on blood regeneration, but not sufficient to warrant its use in uncomplicated second-

ary anemia in view of the favorable action of meat and other diet factors. Musser has studied the effect of inorganic iron in a type of anemia representing more closely what is seen in clinical medicine. He found that ferrous carbonate failed to produce any alteration of the experimental hemorrhagic anemias. All of the more recent evidence indicates that the iron is of paramount importance in red blood cell regeneration.—(*Jour. A. M. A.*, Feb. 18, 1922, p. 512).

Urotropin was removed from the list of articles accepted for New and Nonofficial Remedies because Schering & Glatz, Inc., refused to place the U. S. Pharmacopeia name hexamethylenamine (hexamethylenamina) on the label and in its advertising so as to make clear to physicians the identity of the product, and because it was sold under therapeutic claims which the Council held unwarranted. An advertising pamphlet sent to physicians in 1921 contains a number of unwarranted statements; particularly objectionable are the claims made for the use of Urotropin as an antiseptic in body fluids that are alkaline, such as the cerebro-spinal fluid, bile, aqueous humor of the eye, saliva, the excretions caused by middle ear infection and other excretions of the nasal, bronchial, laryngeal and mucous membranes. The lack of efficacy of hexamethylenamine in alkaline secretions is generally admitted, and the clinical references to the use of hexamethylenamine in the pamphlet are obsolete. In the introduction to the pamphlet, Schering & Glatz state that they are well acquainted with the scientific research work discrediting the efficiency of hexamethylenamine in non-acid media, but that they feel that the accumulated evidence for its efficacy in such conditions should not be "brushed aside". However, the pamphlet is not made up of quotations, but of unqualified statements. With one exception, all reference to the antiseptic properties of the drug in alkaline media are previous to 1913, that is, before the importance of reaction of the medium was fully appreciated. To quote these earlier articles, without regard to the later work which in most eyes discredited them, constitutes in effect an exploitation of this brand of hexamethylenamine under unwarranted therapeutic claims.—(*Jour. A. M. A.*, Feb. 18, 1922, p. 531).

LIPOIDAL SUBSTANCES (HOROVITZ BIO-CHEMIC LABORATORIES CO.) NOT ADMITTED. According to the Horovitz Bio-Chemic Laboratories Co. (A. S. Horovitz, president), Horovitz has discovered or developed a treatment for drug addiction. This is marketed by the Horovitz Bio-Chemic Laboratories as Lipoidal Substances. The treatment consists, first, in the withdrawal of the narcotic; second, in free catharsis; and third, in the intramuscular injection of the preparation. In its request for the admission of Lipoidal Substances to New and Nonofficial Remedies, the Horovitz Bio-Chemic Laboratories Co. informed the Council on Pharmacy and Chemistry that the product contained lipoids of plant origin, vitamines (water-soluble) of plant origin and nonspecific plant proteins. While the communication abounded in generalities, it gave neither the identity nor character of the lipoids, of the vitamines, nor of the nonspecific protein, nor their quantities or the methods for their control. The firm presented no evidence that the injection of Lipoidal Substances produces any effect other than by suggestion. The Council declared Lipoidal Substances inadmissible to New and Nonofficial Remedies because the composition is essentially secret and because the curative claims are unsubstantiated and therefore unwarranted.—(*Jour. A. M. A.*, Feb. 25, 1922, p. 600).

BIO-CHEMIC LABORATORIES' PRODUCTS.—The Bio-Chemic Laboratories, Chicago and Los Angeles, send out the following advertising: 1. "Salvarsan and Mercury Without the Needle". In this pamphlet the use of Salv-Absorbs and Merc-Absorbs, preparations for the rectal administration of arsphenamine and mercury, respectively. 2. "Something New in Glandular Therapy—Caplets". This circular declares that "Caplets make possible the preparation of any pluriglandular combinations in your office * * * Your office girl can make them up for you". 3. "Why Gland Transplantation?" A circular devoted to "Orch-Absorbs" which is said to be "a preparation of interstitial glands for intra-rectal administration". No preparation of the Bio-Chemic Laboratories has been accepted for New and Nonofficial Remedies. The Council on Pharmacy and Chemistry, however, has published a report on another proprietary form of administering arsphenamine by rectum. This brings out the lack of evidence for the efficacy of this method of arsphenamine administration. The pluriglandular "Caplet" medication is a form of shotgun therapy that has been the subject of a report of the Council on Pharmacy and Chemistry and has been discussed editorially.—(*Jour. A. M. A.*, Feb. 25, 1922, p. 603).

NEW AND NONOFFICIAL REMEDIES

ANIMAL EPIDERMAL EXTRACT ALLERGENS-SQUIBB.—Powders representing the alkali-soluble protein from the hair and epidermis of animals or from the feathers of fowls. Animal Epidermal Extract Allergens-Squibb are employed for the diagnosis of asthma or perennial rhinitis. The patient's susceptibility may be tested in the same manner as that employed for pollen extracts. They are not intended for treatment. The following allergens have been accepted: Burro Dander Allergen-Squibb, Burro Hair Allergen-Squibb, Cat Dander Allergen-Squibb, Cat Hair Allergen-Squibb, Chicken Feathers Allergen-Squibb, Cow Dander Allergen-Squibb, Cow Hair Allergen-Squibb, Dog Dander Allergen-Squibb, Dog Hair Allergen-Squibb, Duck Feathers Allergen-Squibb, Goose Feathers Allergen-Squibb, Horse Dander Allergen-Squibb, Horse Hair Allergen-Squibb, Rabbit Dander Allergen-Squibb and Rabbit Hair Allergen-Squibb. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Feb. 4, 1922, p. 349).

BACTERIAL ALLERGENS - SQUIBB.—Protein extracted from bacterial cells. Bacterial proteins have been used cutaneously for the diagnosis of anaphylaxis to the metabolic products from specific bacteria. Their utility is debatable. The following allergens have been accepted: Bacillus Coli Allergens- Squibb, Bacillus Pertussis Allergen-Squibb, Bacillus Typhosus Allergen-Squibb, Catarrhalis Allergen-Squibb, Gonococcus Allergen-Squibb, Pneumococcus-I Allergen-Squibb, Pneumococcus-II Allergen-Squibb, Pneumococcus-III Allergen-Squibb, Pneumococcus-IV Allergen-Squibb, Staphylococcus Albus Allergen-Squibb, Staphylococcus Aureus Allergen-Squibb, Streptococcus Pyogenes Allergen-Squibb, and Streptococcus Viridans Allergen-Squibb. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Feb. 4, 1922, p. 349).

BUTYN.—Paraminobenzoyl-gammadinormal butylaminopropanol sulphate. It is a local anesthetic proposed as a substitute for cocain, particularly in surface anesthesia, as for the eye, nose and throat. It has the advantage of acting through intact mucosæ almost as effectively as cocain. On the normal human eye, a 0.5 percent solution of butyn is less effective than a 1 percent solution of phenacain, but more efficient than a 1 percent solution of cocain or a 1 percent solution of eucain. Butyn has been used with success in practically all operations on the eye and in some operations on the nose and throat. Butyn is supplied in solution and also as Butyn Solution, 2

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PITUITRIN "O".—An extract of the posterior lobe of the pituitary of cattle, approximately 2½ times the strength of Solution of Hypophysis U. S. P. For a discussion of the actions and uses see article Pituitary Gland. New and Nonofficial Remedies 1921, p. 219. Pituitrin "O" is supplied in 0.5 Cc. and 1 Cc. ampules. Parke, Davis & Co., Detroit.—*(Jour. A. M. A.*, Feb. 11, 1922, p. 431).

ALYPIN.—The hydrochlorid of 2-benzoxy-2-dimethyl-amino-methyl-1-dimethyl-amino-butane. Alypin is a local anesthetic claimed to be equal to procain, but is not a mydriatic. It is said not to produce disturbance of accommodation and to be less toxic than cocain. But the evidence as to the relative toxicity of alypin and cocain is conflicting. Alypin is used in solutions having about the same strength as solution of cocain hydrochlorid. Winthrop Chemical Co., New York.

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WHOOPING COUGH VACCINE-SHERMAN.—Pertussis bacillus vaccine (see New and Nonofficial Remedies 1921, p. 308) marketed in 10 Cc. vials. G. H. Sherman, Detroit.

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ACNE STAPHYLOCOCCUS VACCINE-SHERMAN.—A mixed vaccine (see New and Nonofficial Remedies 1921, p. 314) marketed in 10 Cc. vials each cubic centimeter containing 40 million killed acne bacilli and 1,000 million killed Staphylococcus albus. G. H. Sherman, Detroit.

BACILLUS COLI ANTIGEN (No. 50)-PERSSON.—A colon bacillus vaccine (see New and Nonofficial Remedies 1921, p. 299) marketed in 20 Cc. vials, each cubic centimeter containing 1,000 million killed colon bacteria. Persson Laboratories, Mount Clemens, Michigan.

FURUNCULOSIS VACCINE MIXED (No. 37)-PERSSON.—A staphylococcus vaccine (see New and Nonofficial Remedies 1921, p. 306) marketed in 20 Cc. vials, each cubic centimeter containing 2,000 million killed staphylococcus aureus and 2,000 million killed staphylococcus albus. Persson Laboratories, Mount Clemens, Michigan.

(Continued on Advertising Page XX)

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(Continued from page 108)

STAPHYLOCOCCUS AUREUS ANTIGEN (No. 49)-PERSSON.—A staphylococcus vaccine (see New and Nonofficial Remedies 1921, p. 306) marketed in 20 Cc. vials, each cubic centimeter containing 3,000 million killed staphylococcus aureus. Persson Laboratories, Mount Clemens, Michigan.

GONOCOCCUS ANTIGEN (No. 47)-PERSSON.—A gonococcus vaccine (see New and Nonofficial Remedies 1921, p. 300) marketed in 20 Cc. vials, each cubic centimeter containing 3,000 million killed gonococci Persson Laboratories, Mount Clemens, Michigan.

STREPTOCOCCUS ANTIGEN (No. 48)-PERSSON.—A streptococcus vaccine (see New and Nonofficial Remedies 1921, p. 309) marketed in 20 Cc. vials, each cubic centimeter containing 1,000 million killed streptococci. Persson Laboratories, Mount Clemens, Michigan.

PNEUMONIA VACCINE (No. 36)-PERSSON.—A pneumococcus vaccine (see New and Nonofficial Remedies 1921, p. 304) marketed in 30 Cc. vials, each cubic centimeter containing 8,000 killed pneumococci, Types I, II, III and Group IV in equal proportions. Persson Laboratories, Mount Clemens, Michigan.—(*Jour. A. M. A.*, Feb. 25, 1922, p. 581).

BOOK REVIEWS

GENERAL PATHOLOGY—An Introduction to the Study of Medicine. Being a Discussion of the Development and Nature of Processes of Disease. By Horst Oertel, Strathcona Professor of Pathology and Director of the Pathological Museum and Laboratories of McGill University and of the Royal Victoria Hospital, Montreal, Canada. Cloth, Pp. 357, with Illustrations. Price $5.00 net. New York: Paul B. Hoeber.

Oertel has given us, in these 357 pages, a text-book which the average practitioner can read with both pleasure and profit. This statement will not apply to many text-books on the subject of general pathology. The book gives, in a compact form, an illuminating picture of the present status of general pathology. The author's style is commendable. A reviewer in the J. A. M. A. criticized this book rather severely; it must be admitted that much of this criticism was justifiable. It was inexcusable for the author to have misspelled names and words, to have made no mention of the water transmission of typhoid, and to have omitted all reference to the flea in connection with rat plague. Most of the errors are found in connection with subjects which pertain to bacteriology. The balance of the book is of sufficient value to justify the reviewer in recommending it to the readers of THE JOURNAL.

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ORIGINAL ARTICLES

BILIARY INFECTIONS*

JOHN W. SLUSS, M.D.
INDIANAPOLIS, INDIANA

Fashions, fancies, and fads hold sway in medicine as elsewhere. Illustrations are not far to seek.

In times past, it has been (to cite a single example) the fashion with our predecessors of a particular period to attribute most of the body's ills to some perversity of the liver, or to the humors in some occult manner arising therein. The liver bulked so large in their pathological notions as to overshadow all else. Even so, it is not certain that they may not have had something the better of us who, in these latter days, in our disease summations, fail in such degree to take this important viscus into account.

Liver Relations and Functions. Its morphological and anatomical relations are immensely significant. No disorder in the digestive tube can be properly considered apart from it, for like the pancreas, it is embryologically a very special elaboration of the same primitive cell groups that form the epithelia of the stomach and duodenum. The operation of its cells profoundly interests those of other organs. It seems to be demonstrated, even, that the brain itself cannot exist without the liver. A normal liver function is the "sine qua non" to normal brain function. Indeed, lay writers of all times have imagined an intimate connection between quality of thought—in other words, temperament—and certain hepatic states, so that this empiric notion seems now to have acquired a scientific confirmation. The liver, more broadly speaking, has greatly to do with the whole metabolism of the body. In addition it is a large factor in body defense—an important fact not sufficiently emphasized. On the metabolic side it is intimately concerned with the last elaborations of the proteid food substances—the amido acids—on their way to the tissue cells. From the carbohydrates it elaborates glycogen which becomes stored-up energy. Finally it furnishes bile, a part of the function of which is to split up the hydrocarbons and prepare them for absorption and assimilation.

Its *defense function* consists in straining many noxious substances out of the blood, such as bacteria, protozoa and the toxic products of imperfect tissue oxidation,—a function so important we might well make it one of our fads. In a word, the liver, unlike any other, is equally important as an organ of secretion and of excretion; this is a concomitance of its unique relation to the circulatory system—a relation which should always be insisted upon. Its proper nutrition (at any rate of its parenchyma) is not derived from the general circulation as in the case of all other organs, but is derived directly from the portal vein. In the foetus this arrangement results in a great preponderance of hepatic growth, so that the fetal liver is large, out of all proportion to the other units of the organism.

Which of the liver's elaborations are secretions and which excretions? Physiologists are not clear on this point, particularly in the case of bile. Bile is quite probably both: secretion, represented by the bile salts; while excretion is represented by the bile pigments, salts of iron, copper and magnesium, neutral fats, nucleo-proteins, phosphatides and cholesterol. Bilirubin and cholesterol are the two excretion products of special note in this connection, and furnish the keynote to this paper. Bilirubin is formed originally in the spleen through disintegration of the red blood corpuscles and the splitting-up of the hematin. It is transported to the liver and eliminated with the bile. It undergoes some further change in the intestine; some of it forming *urobilin*, a part of which normally is reabsorbed. If the liver be overtaxed, urobilin makes its appearance in the urine in undue amounts. Blocking of its excretory ducts results most quickly in impaired function. Again, if the bile flowing through the biliary ducts be acted upon by certain bacteria, one of the immediate results of such bacterial action is the formation of an excess of urobilin which, of course, must be eliminated by the kidneys. The practical point is this:

*Read before the Section on Medicine of the Indiana State Medical Association at the Indianapolis session, September, 1921.

That the presence of an excess of urobilin in the urine is not only an index of impaired liver function but is also a strong indication of infection in the biliary ducts.

Cholesterol or cholesterin has been the subject of much recent investigation. First discovered in the bile, as its name indicates, it was supposed to be secreted by the mucosa of the gall bladder. It is a carbon-hydrogen-oxygen compound, a monatomic alcohol, a primary cell constituent and is doubtless a product of protein metabolism. Luden, of the Mayo Clinic, has made a long series of experiments to determine its importance in the economy and seems to have established a definite relationship between diet, blood cholesterol and the lymphoid defense. It is indicated, for example, that an excess of food rich in cholesterin, as the yolk of eggs, increases the cholesterol content of the blood but decreases the activity of the lymphocytes.

Now cholesterol is an excretion product in the bile and is held in solution by the bile salts and soaps. This solvent quality of the bile is reduced by changes in its mucin content induced by bacterial attack on the mucosa. With this result, viz., that the cholesterol is precipitated and a coagulum is formed containing cholesterin, mucous and bacteria, and, in some instances, bile pigments, calcium and magnesium salts. This is the genesis of gall stones, a complex of faulty metabolism and bacterial action. These reactions may take place in any part of the biliary tract, though of course most commonly in the gall bladder.

The point we are driving at is this—*that biliary infection is antecedent to cholelithiasis.* From this point of view gall stones are mere accidents in an important pathological process. They are by-products of bacterial action in the bile ducts; in other words, they occur in some cases of infective cholangitis. And if they occur more frequently in the gall bladder it is only because the gall bladder furnishes the conditions most favorable for bacterial growth.

Now the subject of gall stones has held the fancy of the surgeon since the time of Bobbs and the surgeon has dominated this field. The internist did not give it up, however, without a struggle. As late as 1890 we find one of the Professors of Medicine in the University College of London, advocating the diagnosis of gall stones by sounding with a trocar; and their removal, by manipulation of the abdominal wall. But surgery in the course of time has gone to seed on the question of gall stones, and now the situation is reversed. Without further argument we say simply that for a time at least we are going to relegate gall stones and to think in terms of cholesterinaemia and cholangitis, perhaps, even to the extent of developing a fad.

What bacteria are concerned in cholangitis and how do they gain an entrance to the bile ducts? First and foremost are those of the colon group.—the communis coli, the typhoid, the paratyphoid and related organisms. It might be expected, a priori, that these bacteria would be at home in a bile content since their habitat is the colon. Normally, but not constantly, they are found also in the duodenum and the ampulla of Vater. Gastro-duodenal catarrhs furnish favorable conditions for their invasion of the common duct and thence they spread to the radicals of the biliary system. With less frequency they are carried to the liver by the portal vein and under certain conditions of lowered resistance filter through it with the bile to gain eventually a foothold in the mucous lining of the bile tracts. In other cases, perhaps, their approach is by lymphatic paths. These bacilli are the most frequent cause of the milder types of cholangitis and are the most important factor in cholesterol precipitation and so of stone formation.

The staphylococcus does not seem of great importance in the etiology of biliary infections. It is more easily destroyed by the liver perhaps, or if it is of a virulent type, it is more likely to form small emboli and thus give rise to abscess formations in the liver substance.

The pneumoccocus does not seem capable of living in bile.

It is the *streptococcus* that gives us the most concern in this epoch. It seems that since the great grippe epidemic of the late eighties, the activities of the streptococcus have almost changed the character of infective disease. The grippe organism and the streptococcus are probably commensal or symbiotic, with their first predilection for the lymphoid tissues of which the tonsil and the appendix (especially in the young) are chiefly composed. From these coigns of vantage they sally forth for attack upon other tissues. Thus the tonsil may be the most frequent source of the infection which is such a large factor in gastric or duodenal ulcer, while the appendix, probably, more often infects the hepatic area. These infections frequently constitute in themselves a vicious circle—infecting and reinfecting—so that one who seeks to trace cause and effect loses himself in a bewildering maze.

The acute forms of streptococcus infection in the bile tracts produce the edemas and the gangrenes that present the most urgent symptoms. The more chronic forms give rise to fibrosis with a long chain of evil consequences —obliteration of the gall bladder or the ducts, distortions, changes in relation of the pylorus, etc., by reason of adhesions; and as secondary sequelae, serious disturbances of function in

the stomach, duodenum, colon and pancreas, not to speak of the multiplicity of remoter complications. And at any time these cocci may take on a hemolytic form. Many cases of supposed pernicious anemia or hematogenous jaundice are at bottom streptococcic infections in the biliary tract. In many such cases a tarry bile will be found in the gall bladder. Cultures from the bile may be negative but taken from the mucosa will be positive. In the milder types of infection the progress of the disease may be quite insidious. The most serious change may take place without the patient's suspecting. Hydrops of the gall bladder is a single example of such change.

The *practical application* of these observations is that it is imposed upon us to associate the idea of slight infective tissue change in the bile passages with functional change; to reconstruct our notions of all that the old term "biliousness" connotes; to devise a more alert symptomatology to the end that we may anticipate and prevent these serious surgical conditions. For in these cases surgery can never secure a complete and permanent restoration of function—*and these conditions are largely preventable.* Prophylaxis, then, constitutes the first line of defense, the underlying principles of which can be, at this time, only indirectly suggested in calling to mind the several factors that predispose to biliary infection. These predisposing factors are: (1) Errors of diet—those which excite gastro-duodenal congestion, those which afford a preponderance of a class of food substances—whether it be excess of proteid and cholesterol forming foods or an excess of fats, or those which keep the physiologic function at a constant high pitch. Diet in its relation to biliatian furnishes a large field for further clinical and laboratory experiment. (2) Pregnancy, which predisposes to biliary infection in several ways, bio-chemically and mechanically. In this connection we cite, for example, only one significant fact: In pregnancy the blood cholesterol is always greatly increased. (3) Foci of infection, a factor which might be evaluated in detail without end.

Diagnosis. With these known predispositions to suggest, and certain well defined groups of symptoms to point the way, one should seldom fail to reach a correct conclusion as to the presence and the nature of a biliary infection. Important special symptoms are referable to the brain, the stomach, the bowel, pains direct and referred, the skin changes, and so on. We spoke of "biliousness" which is a term not to be laughed at, for it suggests a definite clinical picture,—headache, impaired cerebration, gastric disturbance, muscular debility, slow pulse, lowered blood pressure, etc.—which are doubtless the expression of choline poisoning. Now if to these manifestations of functional disturbance we add the findings of persistent and patient examinations of the blood and excreta, we will seldom go far astray in the diagnosis of biliary infection even in its primary forms.

Primary changes in the ducts due to infection. There is a special reason why primary inflammations in the bile ducts—these earliest forms of cholangitis—have attracted comparatively little attention. The explanation lies in the fact that they are not apparent at necropsies,—the edemas and congestions having disappeared post mortem. The earlier tissue changes in the bile ducts due to infection, even in life, are not always apparent to the most practiced operating surgeon.

McCarty, of the Mayo Clinic, has recently described the microscopic changes and the order in which they probably occur. (1) Congestion and edema of the villi which are sometimes cystic. (2) Lymphocytic infiltration involving, gradually, the mucosa, the submucosa, the mucularis and subserosa. (3) Fibrosis involving all these layers. (4) The presence of large spheroidal cells filled with finely granular lipoid substances in the mucosa and submucosa. It is emphasized that these changes are not limited to the gall bladder and extrahepatic ducts, but are found in the ducts within the liver as well. These findings have extreme clinical significance and are worthy an hour's elaboration; the gross pathological changes, on the other hand, are so well known as to require no description.

Treatment of Biliary Infections. The treatment of biliary infections should first of all be prophylactic, the details of which are connotated in the enumeration of the predisposing factors which have been referred to. If prophylaxis has been lacking or ineffectual and infection is well developed, there is only one treatment of any avail, and that is *drainage.* The drainage may be *medical* or *surgical.*

In the acute catarrhal forms of cholangitis, medical drainage may be efficient and sufficient. By this is meant that measures are instituted to reduce the gastro-duodenal edema in order that the orifice of the common duct may regain its patency and a free flow of bile be established. To this end the digestive tract is emptied completely and kept so, in the meantime supporting the patient by rectal enemata —mostly saline.

In some cases the duodenal tube may be employed with the instillation of magnesium sulphate. Other adjuncts are useful insofar as they promote the one end, viz., to secure the free flow of bile. But medical drainage may be obviously a "pis aller"—going from bad to worse.

In the acute cases with indications of complete obstruction or of sepsis, and in the

chronic cases, it is indicated to drain surgically without delay. Ordinarily it is sufficient to drain through the gall bladder although in many cases it is necessary to place the drainage tube in the common duct or even extend it to a hepatic duct.

If a tube is left in the gall bladder only, it is imperative to be assured that the cystic duct is patent. If the common duct is permanently obstructed, plastic work will be necessitated, securing permanent drainage by anastomosis of the duct and duodenum, or of the gall bladder and duodenum, or even reconstructing the duct over a rubber tube.

External drainage should be encouraged until the bile is quite sterile and until the evidence that it escapes normally into the intestine is complete. The technique of drainage is too well established to require discussion.—the main points being to operate in such manner as not to spread infection and to prevent adhesions. In cases requiring simple tubal drainage the gall bladder should not be attached to the abdominal wall as was formerly the custom but it should be walled off from adjacent structures with rubber tissue. If, however, the mucosa is seriously impaired it will be better oftentimes to fix the gall bladder in the abdominal opening and drain with gauze. The chief difference of opinion at this time is as to the relative merits of cholecystotomy and cholecystectomy.

My own opinion is that the gall bladder should never be removed except for one cause, viz., permanent loss of function. In acute cases its function is permanently destroyed if its walls are gangrenous or edematous and thickened; in the chronic cases, if it is sclerosed. The problem is not so simple as that, of course, but it is not possible at this time to consider the functions of the gall bladder and the arguments pro and con *in re* removal. But this is certain, that the dictum that the gall bladder should be treated like the appendix has done incalculable harm, for it has encouraged the tyro who removes an appendix with passable grace to regard biliary surgery as a "get in quick, get out quick" affair, with its chief end to secure another surgical scalp in the shape of a gall bladder to hang out to air as an added proof of surgical prowess—a technique as erroneous as it is vicious. The immediate results, it is true, may be excellent but what happens more remotely—well, that is on the knees of the gods. Whatever the serious or even lamentable eventualities, the operator may complacently fold his arms and say: "There is nothing more to be done; I removed the gall bladder." The traumatism done to the hepatic or common ducts, or their wholly inadequate drainage, does not appear in the record. There is no surgery that calls for a higher class of surgical judgment, and no technique is in any degree efficient which does not include a thorough examination of the liver and its adnexa, the stomach, the adjacent portions of bowel and the pancreas.

And whatever one's technical skill and surgical judgment his work is not permanently effective unless supplemented by an *after treatment* which may need to extend over months or years, the purpose of which is to correct the patient's predispositions and the recurrence of his biliary infection in more aggravated forms.

I should like to restate my thesis in even simpler terms:

(1) The importance of hepatic function is being overlooked both in diagnosis and therapeusis.

(2) The question of gall stones and their surgical treatment has overshadowed allied problems to a serious extent.

(3) Gall stones are to be regarded merely as by-products and not the inevitable concomitants of cholangitis—of infective inflammation of the biliary passages.

(4) Our attention should be directed to the bacterial agencies of cholangitis, their foci and mode of attack.

(5) The most common infective agents are the colon bacilli and the streptococcus, each of which is capable of producing a syndrome: The colon bacilli more related to catarrhal processes with adventitious choielithiasis; while the streptococci give rise to the serious acute inflammations and in chronic forms the slowly destructive and sclerotic changes.

(6) The sole principle of surgical treatment of cholangitis is drainage, which includes removal of mechanical obstruction.

(7) Removal of the gall bladder should not be made a routine part of such drainage.

(8) Surgery of the biliary tracts calls for the highest degree of surgical judgment independent of technical skill.

DISCUSSION

DR. W. D. ASBURY (Terre Haute): It appears to me that the subject of biliary infection is one of the most important things with which we have to deal. It has happened often in the past that the surgeon has performed a cholecystectomy or a cholecystotomy and still has some of the same condition remaining, just as the removal of a gastric ulcer does not always remove the source of trouble. A study of the gall bladder and liver functions is a particularly interesting one from its embryological, physiological and anatomical standpoints.

To have a clear understanding of the stomach, the liver, the duodenum and the pancreas we should know of their embryology, anatomy

and physiology. These organs are all embryologically very closely related and for this reason it is very difficult to differentiate certain diseased processes of these organs. They all receive their nerve supply through the splanchic nerve. The peculiarly nice adjustment of the flow of bile in man has been brought about through the sphincter of Oddi and the ampulla of Vater, whereby when bile is needed the flow can be regulated according to gastric needs and the remainder can be stored until further needed. This continuous flow of bile in lower animals has been converted in man to a dis-continuous flow. If we leave out these fundamental facts we have left out the most important consideration. All medical treatment following these gall bladder operations should be rendered in the light of these above facts.

The subject of cholesteremia of the blood is especially important. Urinalyses are often made with the thought that one is analyzing things from the kidneys. Perhaps even the sugar and other excretory products found in the urine should be considered an output of the liver as well as the kidneys. When a child does not wish to eat the yolk of an egg, he probably knows more about it than the doctor who recommended it, for it increases the cholestoral of his blood. All treatment directed toward these biliary infections should be done with a clear understanding of the above facts.

DR. WILLIAM H. FOREMAN (Indianapolis): I wish to say that the seeming infections of the gall bladder are often not infections of the gall bladder. We have instances where the gall bladder has been drained and even where cholecystectomy has been performed, with the patient having the same symptoms that he had before, so we cannot attribute these symptoms to the gall bladder infection. These conditions may be due to stasis in the colon. As we know, there are no glandular secretions in the colon to prevent fermentation or decomposition of the food, so we have fermentation and decomposition occurring in the colon when there is retention, and which may give us the symptoms of "biliousness". So I believe many of these symptoms of so-called biliousness are not due to gall bladder but to colon conditions. However, it is my custom to make a blood count in such cases and if the blood does not show an increased leukocytosis I question whether we have a gall bladder infection. A leukocytosis very seldom occurs from fermentative changes in the colon but is usually present in acute gall bladder infections. I think a very careful blood count is necessary to know whether the patient should have the gall bladder drained, or whether his colon should be looked into and the condition corrected there.

DR. GEORGE W. MCCASKEY (Fort Wayne): The author rather incidentally mentioned studying the bile passages by the use of the duodenal tube according to the Meltzer-Lyon method. I have been very much interested in this subject and have made about one hundred observations on about forty patients. The contents of the gall bladder cannot be uniformly obtained and I prefer my clinical assistants to consider bile passage drainage instead of specifically gall bladder drainage which may or may not have been accomplished. It seems to be quite rational to procure the bile if we can, segregate that derived from different parts of the biliary tract if possible, and study it in every possible way, just the same as you would secretions from the stomach or urinary tract. I regard it as an extremely important addition to our methods, although its exact scope and limitations have not been determined. I will add, however, that in many instances I have been shown the segregated bile specimens, and have not the slightest doubt that the gall bladder has been at least partially emptied, and that in such cases it can be separately studied. In a number of cases we have been able to definitely prove the existence of pus, pathogenic germs, etc.

Although speaking with considerable reserve I will say that in at least a few cases very definite therapeutic results were apparently obtained.

DR. GEORGE W. SPOHN (Elkhart): The second discussant stated that in some instances we find a colonic infection. He did not give us the differential diagnosis as to when we have a colon and when a biliary infection, and I would also like to know what the treatment is if it is a colon infection.

DR. WILLIAM H. FOREMAN (Indianapolis): (Replying to Dr. Spohn). It would take a long time to answer Dr. Spohn's questions. One point I mentioned in the differential diagnosis is that if the blood count does not show a leukocytosis it is pretty evident we have no acute biliary infection. Of course, I realize we may have a chronic, low grade biliary infection and no change in the blood count. We have cases that have been operated with the gall bladder drained and sometimes the bilious symptoms persist just as before. That is not saying anything against surgery for I thoroughly believe in drainage of the gall bladder and cholecystectomy when indicated, but I say that we have cases in which this has been done and the same symptoms obtain, and then we must think of something else and usually in these cases the difficulty lies in the colon. I could answer the question as to treatment if I had time, for they can be treated and absolutely cleared up if it is a colon condition, but I have not the time to go into this now.

DIAGNOSTIC USES OF THE DUODENAL TUBE

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During the last decade the ever-widening clinical application of the duodenal tube has greatly increased our knowledge of gastro-intestinal disease by rendering the clinical data more available. To this has rather recently been added the diseases of the biliary apparatus. Though primarily intended for duodenal examination, it has, in my work, and I think in that of most other clinicians, entirely superseded the Ewald tube in gastric analysis. Its advantages are obvious. Perhaps the greatest of these is that because of its small size, softness and flexibility of construction, it can be tolerated for hours, or even days, permitting of many and frequent observations of gastro-intestinal chemistry, or even repeated therapeutic procedures.

Fractional Gastric Analysis. The old method of removing the test meal in one hour, and classifying the case according to the findings at that time, was based upon the false assumption that the crest of the acid secretion would then be reached. It would not have been practical in many cases to introduce the cumbersome Ewald tube more than once, and it therefore became necessary to select some uniform time for the procedure. We now know, however, that there are wide variations in the time of maximum secretions.

In the following table the findings in ten selected cases are given in relation to the free HCl content, during gastric digestion. The figures corresponding to a given case at a certain time represent "degrees" of HCl acidity, the standard being that 100 degrees represents decinormal HCl, which is equal to about .36 per cent.

HCL IN FRACTIONAL STUDIES

Case No.	1 hr.	1¼ hr.	1½ hr.	1¾ hr.	2 hrs.
1	36		35		0
2	0		0		15
3	0		12.5	15	
4	10		10		24
5	23	57	64		
6		28	50	76	52
7	20	31	40		
8		12	36	34	46
9		90	50	50	
10	0	0	0	0	

A glance at these cases will show how entirely unreliable would be any conclusion as to maximum secretions based on an analysis made at the expiration of one hour.

The curve of secretions in case "1" apparently conforms fairly well to the older work, the maximum free HCl contents probably being reached in about one hour, and disappearing in two hours. Cases "2" and "3" would have been classed as achlorhydrias, whereas they are really hypochlorhydrias. Cases "5" and "6", on a one-hour basis, are quite within normal range. As a matter of fact they are both definite hyperchlorhydrias. Case "7" begins fairly low, but ends rather high. Case "10" begins the same as "2" and "3", but remains consistently achlorhydric throughout, and case "9" is a definite hyperchlorhydria, with the maximum secretions, during the period of observations, at 1¼ hours.

There are of course other phases of gastric secretions, aside from the free HCl content, which can be "fractionally" studied in this way, but this shows better perhaps than any other single phase, the pathologic aspects of gastric secretions. It is probably more often perverted, and also, more than any other, offers valuable therapeutic suggestions.

These observations, taken more or less at random from my clinical records, are not designed so much to throw light on gastric secretions as to indicate the clinical applications of the duodenal tube in the study of gastric diseases.

We have analyzed two hundred recent consecutive cases, simply to determine in what proportion of cases the HCl secretion increases or diminishes after the first observation made at one or one and one-quarter hours.

Several interesting viewpoints were obtained in this analysis. Excluding the achlorhydrias, of which there were forty-six, or twenty-three percent, one hundred and sixteen, or about 75.3 percent, of the remaining one hundred and fifty-four cases showed an increased HCl content subsequent to the first observation. Again excluding the achlorhydrias, thirty-eight cases, or 24.7 percent, showed a greater HCl content at the first than at subsequent observations. Another interesting point is that seventeen cases would have been classified as achlorhydrias on the basis of the one-hour observation, whereas they all subsequently showed free HCl varying from 20 degrees up to 48 (1 case) and 55 (1 case).

The Study of the Fasting Gastric Contents. If the capsule of the tube is introduced into the fasting stomach, its contents can be studied chemically and microscopically. Information of decisive value may thus often be obtained. For instance the quantity of the fasting secretions may be very large (100 to 200 c.c.) or very small (1 to 3 c.c.). Normally I would say there is from 5 to 15 c.c. or possibly much more. The failure to get any is not necessarily pathologic. Chemically it may vary from an "achlorhydria" to an extreme "hyperchlorhydria", or give both the benzidine and guaiac reaction for occult blood. Microscopically, blood, pus and microorganisms may be recognized, and will have the usual significance.

Duodenal Secretions. Having studied the fasting gastric contents, the stomach is washed out and the tube allowed to remain in the situ. The patient then lies down on the right side and waits for the tube to pass through into the duodenum. This is the most unsatisfactory part of the entire procedure. Ordinarily it passes through in twenty to forty minutes, although it occasionally takes much longer. The determination of the location in the duodenum is not so simple as was at first supposed. Bile regurgitated into the stomach, an occurrence not at all rare, may easily give the false impression that the bulb has passed the pylorus. The reaction cannot be depended on because with regurgitated bile the gastric contents may vary from neutral or faintly alkaline to strongly acid. Substantially the same reactions may occur in the duodenum when acid secretions are poured into it from the stomach. We have found that the fluoroscope offers the only prompt, unequivocal proof, not only of the passage of the tube, which gives a peculiar, unmistakable curve to the latter, but also of its exact position in the duodenum. If, for instance, it has passed too far, it can easily be drawn back to the desired point under fluoroscopic observations.

The fasting duodenum always contains a certain amount of fluid, which may be a mixture of gastric and duodenal secretions, perhaps together with both pancreatic and biliary secretions. This fluid is aspirated and submitted to microscopic and chemical study. The microscopic findings are compared with those obtained from the gastric contents, revealing any additions which may have been made in the way of cells or bacteria. Chemically its reaction and also the degree of acidity or alkalinity is determined, although the latter will depend largely upon the character and quantity of the gastric secretions which have found their way into the duodenum. The enzymes contained in the duodenal secretions and mainly derived from the pancreas are carefully studied. These digestive enzymes are first the proteolytic, second the amylolytic and third the lypolytic. The stomach furnishes the proteolytic enzyme for gastric digestion and may contain the amylolytic enzymes derived from the ptyalim of the salivary glands. The activity of these enzymes contained in the duodenal contents has an important bearing on intestinal digestion and is tested out in an incubator, respectively, by egg albumen, starch and milk fat. Pancreatic disease, or at least impairment of the pancreatic function, can thus be determined and is obviously of the highest diagnostic importance.

Bile Drainage. We have remaining for clinical study with the aid of the duodenal tube, the bulb of which is now in the duodenum, the secretions of the biliary apparatus—a most important and rather recent addition to our clinical methods of research. Whether or not the bile passages are the site of infections is a clinical problem which could not heretofore have been attacked by any method feasible for ordinary clinical study. However, with the bulb of the duodenal tube close to the papilla of Vater, if bile is freely discharged from the common duct into the duodenum it can be readily aspirated for clinical study. It can then be examined microscopically for cells and microorganisms after the duodenal mucosa has been thoroughly cleansed in order to get rid, so far as possible, of any pre-existing material.

In order to secure bile in any considerable quantity, some sort of stimulation must be applied to the duodenal mucosa, without which secretion is either slight or absent. Normally this stimulus is supplied by the acid chyme which is expelled from the stomach when it has been prepared for intestinal digestion. This, of course, heralds the physiological demand of intestinal digestion for bile. In response to any such stimulation the activity of the liver cells is enormously increased, and large quantities of bile are poured directly into the duodenum. At the same time without any reasonable doubt, cystic bile in varying quantities, physiologically altered by the highly complex gall bladder mucosa, is added to the freshly secreted bile, doubtless for some important chemico-physiological purpose.

This is what I have seen happen scores of times from artificial stimulations, the precise nature of which does not appear to be very important; at least substantially identical results can be obtained with different solutions. Because of Meltzer's experimental observations with magnesium sulphate, later taken up clinically by Lyon, a 30 percent solution of this salt is generally used. Within a few minutes after the instillation of 30 to 50 c.c. of this solution, there occurs a free flow of golden yellow colored bile. There is usually 10 to 20 c.c. of this bile and then there follows from 30 to 100 c.c. or more dark colored bile, obtained in whole or in part from the gall bladder, this again to be followed by another flow of golden yellow bile, undoubtedly freshly derived directly from the liver cells. To question the clinical value of the chemical and microscopic study of these secretions would be tantamount to questioning the value of similar studies of the urine. The detailed discussion of the various findings would far exceed the intended scope of this paper, which is limited to a general consideration of the diagnostic uses of the duodenal tube. The writer has elsewhere* discussed these questions at some length with a considerable review of the literature. It may, however, be remarked

(*) "Non-Surgical Drainage of the Bile Passages," awaiting publication in the New York Medical Journal.

here in passing that the microscopical and cultural evidences of infections which may be thus obtained are of prime importance. It is quite possible to recognize these infections in the pre-surgical stage, and perhaps postpone or even entirely prevent the evolution of the latter. This would of course imply the possible prevention of gall stones—a late phenomenon of infection—and also gall bladder empyema. These are admittedly "consummations devoutly to be wished", and I believe in a certain proportion of cases entirely possible.

But perhaps of even greater importance is the bearing which these diagnostic studies, with their potential therapeutic applications, may possibly have upon the different hepatic pathologies classified under the conglomerate term, cirrhoses. No less noted a pathologist than Adami* believes that chronic infections, perhaps biliary, perhaps hematogenous, or perhaps both, play a conspicuous etiologic role in the development of these conditions. It would seem that the earliest possible recognition of these etiological factors might be found in the infections, the recognition of which is thus made possible by the duodenal tube.

Functional Liver Test. In 1913 Rowntree, Hurwitz and Bloomfield* offered a functional liver test which consisted of the intravenous injections of a measured quantity of phenoltetrachlorphthaline. The test as applied to man included the collection of feces over a period of forty-eight hours and the quantity of the dye determined by chemical and colorimetric methods. This method, because of evident drawbacks, was not clinically practical, and I, for one, never had the courage to attempt it in spite of the fact that along with all other clinicians I felt the pressing need of clinical data bearing on liver function.

Recently Aaron, Beck and Schneider† have proposed a modification of this test, in which the time of the appearance of the dye in the secreted bile is taken as the index of the function of the liver. As a matter of fact, this is quite analogous to the time of appearance of the phenolsulphonphthaline in the renal function test, entirely omitting all quantitative estimations, because as these authors observe, of the impossibility of determining the quantity of the dye which would inevitably escape down the intestinal tract. This method seemed to fit in so well with the methods we were already carrying out by duodenal intubation that we decided to try it out, when indicated in such cases, which we are now doing. According to these investigators the normal range or time of the dye to appear, after intravenous injection, is from fourteen to twenty minutes. They conclude that when the dye does not appear in the aspirated duodenal contents until twenty minutes the delay is sufficient to cast suspicion on the liver function, and that delays until thirty minutes or longer are definitely pathologic.

Summary. As an illustration of the amount of information which can be obtained from a single introduction of the duodenal tube, the following technique has recently been carried out in a few selected cases: The tube is swallowed in the fasting condition; the fasting gastric contents aspirated for clinical study, after which the stomach is thoroughly lavaged with normal saline, with or without the use of antiseptics. The tube is then allowed to pass on into the duodenum, and its exact position determined by the fluoroscope. The fasting duodenal contents are then aspirated for clinical study after which the duodenum, like the stomach, is thoroughly lavaged. The magnesium sulphate solution, or other stimulant selected, is then instilled into the duodenum and the bile, the secretions of which have been in this way augmented, is secured for suitable clinical study. At any time after the bile begins to flow, 1 c.c. of a sterile solution, containing 50 milligrams phenoltetrachlorphthaline is injected intravenously, and observations made at one or two minute intervals until the characteristic color reaction is produced when the bile is dropped into a 40 percent NaOH solution. After completion of the bile drainage and liver function test, a gruel test meal, made of cream of wheat or other fine material, is administered, the patient being required to take the gruel slowly, a mouthful at a time, in an effort to obtain insalvation. The progress of duodenal digestion of this test meal can be studied for from 45 minutes to one hour, after which the tube is withdrawn into the stomach and the usual fractional study of gastric digestion carried out.

It is therefore possible, in a case in which it is desirable, by the procedure above indicated, with a single introduction of the duodenal tube to get—

1st. The fasting stomach contents;

2nd. The fasting duodenal contents;

3rd. The secretions of the pancreas;

4th. The secretions of the liver;

5th. Make the functional phenoltetrachlorphthaline liver test.

6th. Make a fractional gastric analysis with the gruel test meal.

(*) Adami, J. G., Sajous's Anylit Cyclopedia of Pract. Med., 8th Ed., Vol. III, p. 401.

(*) Rowntree, L. G.; Hurwitz, S. H., and Bloomfield, A. L.: an experimental and clinical study of the value of phenoltetrachlorphthaline and a test for hepatic function; Bulletin Johns-Hopkins Hospital 24: 327, 1913.

(†) Aaron, A. H., Beck, E. C., and Schneider, H. C.: Phenoltetrachlorphthaline test for liver function: J. A. M. A., 77, 1631, Nov. 19, 1921.

STATE MEDICINE*

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There never was a time when there were so many individuals and such a multitude of organizations with peculiar ideas and theories for the salvation of mankind. We are in a transitional state, aggravated and accentuated by the reaction from the war. We suffer from the Great Unrest. It affects every individual, crops out in every community. It has led to numerous proposals to correct evils, real and imagined. The path of least resistance has usually been followed so that the burdens would be lifted from the individual to the community, from the community to a larger governmental unit, from the state to the federal government. The numerous impractical, unnecessary, costly and elaborate suggestions and devices are often passed unnoticed, except by those who are personally interested in their becoming operative. This is the day of the propagandist, the professional uplifter and the busy-body booster. Among the many things they have tried to accomplish is to tear down what is good in medicine and substitute a system of State Medicine. This term is indefinite, but it is generally accepted to mean that the practice of medicine should be under the control, direction or subsidy of the state or national government.

Within certain limits the state should control the practice of medicine. It is necessary that the state license its physicians. It is also necessary to provide for the care of the insane, tuberculous and others who suffer from incurable maladies. It is right that the state maintain public health departments. It is right that the state should demand safety devices for workingmen, traffic and building regulations. And, difficult as the problem is, I believe it is nevertheless right that the state should attempt to control alcohol and venereal diseases. All these problems are general and require governmental control and regulation.

The problems of clinical medicine are individualistic, for, communicable diseases excepted, treatment is given for the benefit of an individual and not of the public. It is not generally accepted that public health departments provide treatment of non-communicable diseases or relief from physical defects.

In this country the rule is that when a person becomes ill he summons the physician of his choice, whose services he may continue or dispense with. The compensation the physician receives is determined by him and his patient. In other words the practice of medicine is purely a private matter so far as the patient is concerned and he is independent. He is usually able and willing to meet the necessary expenses incident to his illness and maintains his self-respect.

In order that we may study proposals for more economic and efficient care of the disabled, let us briefly consider the medical man from an economic standpoint. The increasing preliminary educational requirements, the added expense of medical training and the uncertain financial returns of medical practice have led to an actual decrease in the number of medical students and physicians who engage in private practice.

From 1904 to 1919 there was a decrease of medical students from 28,142 to 13,052, or a decrease of 53.6 percent, due chiefly to the fact that many medical colleges with low requirements were discontinued. Therefore, a number of prospective students not possessing the essential qualifications were unable to matriculate in the better schools. In passing, it may be pointed out that one reason for the existence of irregular medical cults is the fact that their devotees are able to assume the care of the sick and injured without the expense, effort or preliminary educational qualifications required of medical students, and the further fact that no matter how irregular or how incompetent they may be they are permitted to practice without interference of the state or the public.

There has been noticed the tendency in recent years for medical graduates and physicians who have engaged in practice independently to accept salaried positions with organizations of medical men or those requiring the services of physicians. There is, therefore, an actual reduction in the number of physicians who engage in independent practice. Also, equally noticeable is the tendency for trained nurses to accept employment with organizations. Attention has been called frequently to the inequality of distribution of physicians,—that is the abandonment of the rural districts for the more densely populated centers.

Then there is the development of specialism, the clinics, the diagnostic laboratories. Once more we see the drift away from the older order, —from the family physician and the individual physician. There is now more teamwork among physicians. This is manifested by recent attempts to standardize hospitals.

Medicine is in a transitional stage. From the standpoint of the patient are things going to be better or worse? From the standpoint of the profession, what is the outlook?

Every physician in private practice meets with three classes of patients, considered from their ability to pay for services rendered them. The first are the very poor who cannot help themselves. The second class are those who grade from the poor to the wealthy, those of the great middle class, from whom physicians chiefly derive their income. They are usually able to pay

(*) Read before the St. Joseph County Medical Society.

ordinary fees for services, except in cases where illness is long continued or accidents are very severe. The third class are the wealthy, from whom relatively larger fees may be obtained, but who in the aggregate contribute but a small part to the average physician's earnings.

It is frequently said that the poor and the wealthy may secure the best medical or surgical treatment and to a certain extent this is true. The poor are provided for in one way or another and the wealthy may command the services of anyone they desire. But this great middle class, the principal asset of the medical profession, the people who under ordinary circumstances desire competent treatment and who pay ordinary fees, do occasionally suffer from an injustice in our present system. It cannot be denied that there are extraordinary illnesses or accidents, with attendant economic losses, that at times prove most embarrassing.

Relief from these conditions is sought through charities, fraternal orders, poor relief laws, philanthropic organizations, voluntary insurance, mutual aid societies and the like. But the relief thus afforded is often but partial relief, for the financial returns to the disabled, when he is in need, are usually small and inadequate. The medical profession has not denied its duty towards the needy, and I doubt if anyone who is really in need suffers for want of competent medical attention.

Medicine as an art and as a science naturally undergoes evolution. There must of necessity be changes in methods of diagnosis and treatment to keep pace with scientific discoveries. And there must be adaptations and modifications in practice to meet ever-changing social conditions. Experience has shown that the medical profession has not lagged behind or hesitated to introduce anything which would aid in diagnosis or relieve suffering. Progressive physicians have been alert and studious, if not all leaders, at least capable of utilizing and applying new methods. The successful practitioner must always be a student and I submit the facts that medical publications have a large sale, that our postgraduate medical institutions are prosperous, and that our medical associations and societies are constantly diffusing knowledge, as evidence that the profession as a whole is endeavoring to keep informed and to improve itself at its own expense and effort for the benefit of the public.

Medicine has always been altruistic and now, as in times past, its devotees seek to meet changed social conditions. The problems of the sick and injured are within the province of the medical profession and not of the social reformers. If the history of medicine means anything it may not be amiss to suggest that physicians have and will continue to work out their problems, both scientific, and as far as possible, economic. But it must be insisted that if medicine is to progress it must not be embarrassed by needless restrictions and interference.

State medicine, in its broadest sense, would mean that there would be developed for all the people government hospitals and medical departments corresponding to those existing for the army and navy. All the sick and wounded would be taken care of at government expense, whether suffering from communicable diseases or not. All physicians and other personnel would be agents of the government, state or national. No serious attempt has as yet been made to go this far, but there have been numerous attempts to obtain state medicine in indirect ways, as by the introduction of various bills, particularly those providing for what is commonly called compulsory health insurance.

This came to us as German propaganda before we entered the war. Almost without warning, bills to provide state health insurance appeared in twenty-two legislatures in 1917. These were introduced at the request of the American Association for Labor Legislation, an organization whose membership lists show but few employers, workers or physicians, the three groups immediately affected.

This is the ambitious program these reformers have proposed:

"Health insurance should be required for all employees, to be paid for by employers and employees in equal proportion. The state should pay all costs of state administration as in the case of workingmen's compensation acts and all costs of supervision of insurance carriers. The benefits to workers under health insurance should consist of:

1. Cash payment of a part of the wages of workers disabled by sickness.
2. Complete medical care for the worker, including hospital and home care and all surgical attendance and the cost of all medicines and appliances.
3. Adequate provision for rehabilitation, both physical and vocational, in cooperation with existing public departments and institutions.
4. Dental care.
5. Medical care for the wives and dependents of the workers if the same can be done constitutionally, and a burial benefit for the worker."

These bills were introduced upon the plea that "there is no other measure now before the public which equals the power of health insurance towards social regeneration". In spite of nation-wide propaganda, not a single bill has been enacted into law. It may therefore seem out of place to discuss something which apparently has been settled. But there is no assurance that similar bills will not be introduced in the future because of the encouragement offered by the passage of the Shepard-Towner

bill, which provides national and state aid for expectant mothers and is intimately related to the bill for compulsory health insurance.

What are the objects of state health insurance? Primarily it would appear that its proponents have in mind equalizing or eliminating economic losses due to illness. It must be first shown that there is genuine need for such aid. It has not been proved that the economic loss from sickness is so great, embarrassing or urgent that an elaborate and costly system of state aid is required to offset it. Every physician knows that the major portion of his time is spent in caring for patients whose illness is short lived and does not incapacitate for work for many days.

An argument is that "a national emergency exists as regards the adequate health protection of our people". This assertion is based upon the findings of the draft boards, that one-third of the men examined were declined for military service. These findings are frequently quoted to prove the physical deterioration of the American people. It must be remembered that they were based upon antiquated military standards which were very strict with regard to certain physical defects, and which made a man undesirable for military duty but in no way affected his health or ability to earn a living. When you figure up the draft boards' findings from the standpoint of a health survey they will be toned down considerably when it is learned just what constituted physical defects, according to military standards.

Another argument is that such a system will "make complete medical care available to all wage earners, their wives and children and protect all wage-earners, including those who would otherwise lack the means or foresight to insure". In other words, the workingman will have to take no heed of the morrow, the state will care for him if he gets sick.

It is also asserted that health insurance would "tend to reduce lost time and labor turnover due to prolonged cases of sickness". Just the reverse has been found to be the case in Germany and England where malingering is an ever-growing blight on the workingman. It is believed that the cost would represent four percent of wages paid workingmen, based upon Germany's experience. There is no available information on this subject because German reports do not permit one to determine what percentage of the wages is used. But lately, in England, the rising cost of state insurance has led to decreasing physicians' fees rather than raising the workingmen's contributions. Reliable American students of this proposal estimate the percentage would be more nearly fifteen percent of the employee's wage.

Still another ideal of the reformers is the "hope to reduce the incidence of tuberculosis, feeble mindedness and venereal disease",—certainly most commendable but no information is forthcoming as to the methods to be employed in bringing about the desired reduction.

Whatever arguments may be advanced for compulsory health insurance we cannot lose sight of the origin of the system in Germany. It was political subterfuge. It was not an honest attempt to better the workingman but to control him. It was Bismarck who engineered the plan, which has as its object not health promotion but political domination. It was his solution of the problem of the growing socialistic movement in Germany. It was his means to destroy the Social Democratic Party, and this system has been the most drastic, burdensome and unnecessary means of social control conceivable. It has failed to check the spirit of socialism in Germany. It has failed to protect the health of the German workingman.

In 1911 Lloyd George succeeded in introducing health insurance into England. He has said: "It was from Germany that we who were privileged to be associated with the application of the principle to the United Kingdom found our first inspiration, and it is with her experience before us that we feel confident of the future." Mr. Lloyd George had had no experience which qualified him as an expert on public health and was easily misled and gave his endorsement of a measure which has proved as unsatisfactory in England as it has in Germany.

Compulsory health insurance is unjust to the public, to the workingman, to the employer and to the medical profession.

State health insurance is intended to apply only to workingmen, and, if it has its advantages, they are the advantages of a class as opposed to the public at large. It would not insure the health or care for the majority of the population. It would have no effect in preventing illness or accident. And, ultimately, the public would pay the bills, for the employer to cover his share of the expense would add it to the price of his products. It would, therefore, simply mean a shifting of funds, to which must be added the cost of the shifting, in the way of administrative expenses, that is increased taxes.

Compulsory health insurance is unfair to the workingman because it would compel him to become dependent, to lose his identity and become a card-indexed unit. It will be forced upon him, because he has not asked for it. Labor leaders have repeatedly expressed themselves against the measure. It will destroy the worker's domestic privacy, his self-reliance and self-respect, for he will be subjected to official and officious scrutiny of administrative officers. He will be deprived of five, ten or possibly fifteen percent of his earnings to create his share

of the funds necessary to carry on this insurance. He has no control of these funds. That is the state's business. The workingman must understand that only fifty percent of them will be returned to workers in the form of cash payments, medical services and funeral benefits, while the remainder will be taken from his control to provide for reserve and guarantee against the days of epidemics and catastrophes, but actually made available, under the bills proposed, for the creation of an army of lecturers, social surveyors, field inspectors and other administrative officers. These funds, running into big money, will trickle back to the workingman in tiny rivulets. Aside from financial considerations, the workingman must understand that while apparently he is getting something for nothing or for very little, he will be the one who most suffers. Experience has shown that medical men employed as insurance physicians will not and cannot do them justice because they are burdened by red-tape, limited as to the kind of medicines and surgical appliances which may be used, and overworked by the needless as well as the necessary demands upon their time.

This system is an injustice to the employer inasmuch as he is made responsible for forty percent of the cost of medical care of his employees but has absolutely no control over them in the matter of preventing illness. He cannot require periodic physical examinations nor insist upon corrective surgical operations when they become the controlling factor in health. He cannot enforce cleanliness nor any of the measures to prevent venereal disease. There is a difference between the employer's relation to his employees regarding accident. He is responsible for accidental injuries, not due to the employee's carelessness. It is necessary for him to reduce the accident hazards in his plant and to protect his employees in every way possible. He has some control over his employees, while they are at work. And, there is usually a definite relationship between an accident and resultant disability and the employer is rightly charged with the care and compensation of his injured employees. With the exception of occupational diseases, the employer is not responsible for the illness of his employees and their families, and cannot in justice be compelled to contribute to the support of compulsory health insurance.

Finally, compulsory health insurance is an injustice to the medical profession. It is all too clear what it would mean to the physicians of this state if our legislature should enact a law of this kind. What is the purpose of such a law? Apparently, among other things, to secure medical attention, and this includes dental attention, at reduced cost. If the cost is reduced, who makes the reduction? There is but one answer, the physicians and dentists, and perhaps the law would be interpreted to include the nurses. In England it applies to druggists as well, for there is a list of approved drugs, chosen mainly from the standpoint of cost. If physicians prescribe or druggists dispense drugs not approved they are liable to prosecution. In America it would be difficult to arbitrarily fix the price of drugs, surgical supplies or hospital service and it is apparent that the chief means by which the cost of medical care would be reduced must be in the return for professional services. But, if it can be shown that the public would be benefited, then the medical profession has no right to object to it. The principle, "The greatest good to the greatest number" must prevail. The burden of proof rests upon the proponents of health insurance. Neither the experience of Germany nor England in the operation of state insurance indicates that it is desirable or necessary to adopt it in America.

The Shepard-Towner bill was recently passed and signed by the President. This is a law which bears the trade-mark of the professional reformers. It provides for assistance to the states to help women by prenatal and postnatal care. The federal government is to give from its treasury to any state which accepts its provisions and allots a like sum of money for its purposes: the money to be spent by the state boards to be created, under the direction of the federal board, created by the law. The federal board has but one physician, the Surgeon General of the Public Health Service, as a member, a physician whose special domain is preventive medicine, not obstetrics or pediatrics. The other members are the Chief of the Children's Bureau and the United States Commissioner of Educations, both laymen.

The law provides for an initial expenditure of $1,480,000 by the United States government. The money is to be spent to promote the care of and provide instruction for women in maternity. It is not the intention to provide for actual care of women in confinement. None of the welfare workers will lose an hour's sleep on account of a delivery nor even present the newborn baby with a diaper. That is not the purpose of the law. It is specifically stated that no money shall be spent to build or rent any structure for any purpose nor pay any pension, gratuity or stipend to any mother. The purpose of the law is to provide instruction and if the several states accept its provisions it will be costly instruction, several million dollars worth, in fact. The money will be spent to employ welfare workers. And what will they tell the mothers? That will be determined by the lay board at Washington!

Going back a little into the history of the

bill, it may be recalled that this law is a propaganda law. It was urged by the women's journals. For months these publications carried stories of cases where mothers had been neglected, published statistics showing that this country stands seventeenth in regard to the mortality following confinement, showed that 300,000 babies die before they are a year old and in every way imaginable roused the sympathy and support of their readers. In other words these publications, aided and assisted by numerous women's organizations, created an enormous lobby and kept up a vigorous campaign to secure the passage of this law.

The bill is the work of professional propagandists and from a political standpoint a dangerous experiment. From a medical standpoint it is totally unnecessary, inasmuch as there are now ways and means of securing this instruction and state assistance is not imperative. And further, it will never be possible to rid pregnancy and confinement of some of its dangers and risks. It so happens that the wives of physicians, that trained nurses and women physicians who become mothers suffer from obstetrical accidents just the same as other women. There is no known way of making pregnancy and confinement one hundred percent safe. It is absolutely impossible to materially reduce mortality by a course of instruction. If here and there a woman needs assistance during pregnancy or needs to be supplied with expert care during confinement, then by all means let that be supplied by the community, not by the state or federal government.

The law contemplates needless interference in matters which are private and sacred and not proper for official investigation or inquiry. The proponents of this measure believe that our people have degenerated and cannot care for themselves, but must become wards of the state, that they must sacrifice their independence and individualism and, no longer self-reliant, be guided by some central authority.

The burden of the care of women in maternity and their infants rests upon the physicians of the state, who have been licensed by the state to practice medicine, surgery and obstetrics. It is therefore inconsistent for the state to qualify physicians to practice obstetrics and also authorize and employ a group of welfare workers, not trained as physicians or obstetricians, to instruct women in matters relating to maternity and thus nullify the medical practice law of the state.

No practical good can come from lay instructors who must ultimately advise competent medical attention, which information can be imparted without the elaborate and expensive system contemplated in this law.

Another species of governmental control of medical practice is the limitations and restrictions placed upon physicians in regard to the use of narcotics. The Harrison Narcotic Act became effective in 1915. At first every physician who prescribed or dispensed drugs included in the law was required to pay a license fee of $1.00 per year and later this was increased to $3.00. A tax is usually levied because of some benefit but the physician is not benefited by this law. It was passed to restrict the use of narcotic drugs by addicts. However, though the tax is unjust, it is not nearly as arduous as the keeping of records, inventories and other burdensome paper-work features of the law.

At the time this is written there is considerable agitation concerning the medicinal virtues of certain alcoholic beverages. One day they are medicines; the next all their medicinal virtues are wiped out by legislation. Wonderful alchemy! Questions affecting the public health are evidently not to be settled by medical men. Their advice is not sought. Two opposing forces line up in legislative halls and determine to make might right and not to decide scientific questions according to facts. This tendency on the part of those ill prepared to solve the problems of public health is an ever-growing menace.

We have considered the problem of the care of the sick and injured from an economic standpoint. We have attempted to show that the practice of medicine is undergoing changes from the old order. The influences at work within and without the medical profession have been reviewed. The whole question is not medical but economic.

Economically the health of the people is of paramount importance. Illness and accident must be prevented as far as possible. The sick and injured must be restored to health with as little economic loss as possible. Economically the medical man is entitled to a fair return upon his investment. How can this best be accomplished?

There are many discordant factors difficult to harmonize. With the confusion that now exists there can be no definite solution of the problem unless some of these factors are discarded. It appears that attempts to solve the problem upon a community, collective or socialistic basis must fail, for it does not concern the community as a whole, but relates to individuals as such. The average man is able to provide medical care for himself and his family. Laws cannot produce economic results. It is impossible to equalize or eliminate economic loss from illness. We must provide for exceptional cases by private or organized philanthropy. But we must emphasize and stress individual responsibility, thrift, the Golden Rule, honesty and self-reliance. And when these simple, easily understood, natural and possible virtues are properly emphasized, we will have no need for

imported, complicated, expensive, unnatural, undemocratic and impractical devices to care for our sick and injured. We do not need governmental control or aid. We do need to practice some of the simple, tried and proved principles that have so successfully guided us in the past. To quote Dr. Raymond Pearl: "We shall save a good deal of money and human energy if we first take the trouble to prove that what we are undertaking to do is in any degree likely to achieve any useful end."

AN OLD INDIANA BOOK ON MEDICINE

A BIT OF INDIANA MEDICAL HISTORY

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A writer, some time gone, has spoken warmly of "old books, old friends and old wine". The old medicine book of which I would write is interesting, but does not belong in the class with old friends and old wine. There is no charm, no literary fine quality in it to arouse feelings of intellectual pleasure, but truly it is interesting.

It was published in 1836, in James McCall's Herald Office at Columbus, Indiana. The paper is poor in texture, is tender and tears easily, and has grown yellow and brown, the effect of the tooth of brutal Time. Time too shows its effect upon the plain brown leather binding, although it is true leather and not a base imitation. The types are worn and the workmanship is poor.

The author announces himself upon the flyleaf of the book to be Dr. S. H. Selman, and the title chosen is "The Indian Guide to Health, or a Valuable Vegetable Medical Prescription for the Cure of All Disorders Incident to This Climate". Between this full title and the name of the author we find this: "Designed as a guide to families and young practitioners."

The "Introduction" (he does not say preface) begins with a sentence containing one hundred and twenty-one words. It is decidedly high sounding and carries a flavor of bitterness and protest. It reads: "In all ages of the world the Science of Medicine has engaged the particular attention of the most learned of every nation; and of late years the time and talents of eminent individuals have been employed in communicating to their fellow-men dissertations upon Domestic Medicine; for which they have been censured by a majority of the medical faculty, who, with the most effrontery, assert that, by so doing, 'Every man is made his own physician'; and the consequent result is, that a majority of those who pretend that they have made themselves acquainted with all diseases, and their proper remedies, have to resort to some other occupation to gain a livelihood, and the Science is thereby injured."

How completely this sentence proclaims the man. He announces in it that he is irregular, and without doubt he never saw the interior of even an eclectic college, not to speak of the chiropractic college at Fort Wayne.

Despite the long beginning sentence Dr. Selman closes his introduction without great extension. His ending sentence is—"The reader will find in the latter part of this work, a Materia Medica, which points out the 'simples' wherewith the divine Creator has, in his wisdom, planted our gardens, fields and woods for the healing of our infirmities." He doesn't venture upon a reason why the Creator visited the infirmities upon us.

Dr. Selman wastes no words in presenting what he has to tell but "goes to it" head on. His first information is in regard to Herpes. To show his style I produce his entire matter on this subject.

HERPES

"Herpes consists in an eruption of broad itchy spots dispersed here and there over the skin, of a whitish or red colour, which at length run into each other, discharge a thin serous fluid, and either form extensive excoriations or ulcers. After a certain time scurfy scales appear, which peal off, and leave the under surface red; the same appearances are, however, renewed in a successive series, till the disease is either cured, or goes off spontaneously, which is indeed rarely the case. Being a complaint confined to the skin, it seldom happens that the general health suffers any great change. Its causes may be referred to a want of cleanliness, a low diet, and a damp situation; but certain constitutions seem nevertheless particularly predisposed to herpetic eruptions. The best remedies for these eruptions are ointments; such as the oil of corncobs, pennyroyal, sparemint, etc. While using the ointments, use cooling medicines inwardly, such as senna, salts, etc. Bleeding is also necessary while using the ointments, let the diet be light, there is no difficulty in this case if proper care is taken."

He next tackles "Tinea, or Scalled Head." His description is very good and he suggests "It is propagated by contagion, either by using a comb with the matter from the head of a person laboring under it, or by putting on his hat or cap." His prescription is as follows: "The hair should be shaven off the head and covered with an ointment made of dogwood berries, and the flowers of mulberry, stewed together in sweet oil or hog's lard. This should be used every night and morning. The head should be frequently washed in castile soap and new milk, it also may be washed at times in copperas water. If the glands of the neck should become swelled, a small blister should be drawn on the back of the neck, and be kept a running a few

days. By pursuing this course there is no difficulty of performing a cure. Scalled Head is very unpleasant, and as the doctors of today now know of this cure from the past, the passing of the disease is imminent."

The short chapter on "Hemoptysis or Spitting of Blood" is noticeable in that he differentiates between it and pulmonary hemorrhage. Under spitting of blood he says in part:

HEMOPTYSIS, OR SPITTING OF BLOOD

"In hemoptysis there is a discharge of blood of a florid colour, and often frothy, from the mouth, brought up with more or less of coughing or hawking, and preceded usually by a saltish taste in the saliva, a sense of weight about the precordia, difficult respiration and a pain in some part of the thorax. It is readily to be distinguished from hematemesis, as in this last, the blood is usually thrown up in considerable quantities, is moreover of a dark colour, more gumous and mixed with the other contents of the stomach, and is unattended by any cough; whereas blood proceeding from the lungs is usually in small quantity, is of a fluid colour, fluid mixed with a little frothy mucus, and brought up by coughing. A spitting of blood arises most usually between the age of sixteen and twenty-five, and may be occasioned by any violent exertion, either in running, jumping, wrestling, singing, speaking loud, or blowing wind-instruments; as likewise by wounds, plethora, pneumonia, weak vessels, hectic fever, coughs, irregular living, excessive drinking, or the suppression of some accustomed discharge, such as the menstrual or hemorrhoidal. It may be occasioned by breathing air which is too much rarified to be able properly to expand the lungs. Persons in whom there is a faulty proportion either of the vessels of the lungs, or the capacity of the chest, being distinguished by a narrow thorax and prominent shoulders, or who are of a delicate make and sanguine temperament, or who have had previous affections of the same disease, seem much predisposed to this hemorrhage; but in these the complaint is often brought on by the concurrence of various occasional and exciting causes before mentioned. A spitting of blood is not, however, always to be considered as a primary disease. It is often only a symptom, and in some disorders, such as pleurisies, peripneumonies, and many fevers, often arises, and is the presage of a favorable termination, if only very slight. Sometimes it is preceded (as has already been observed) by a sense of weight and oppression at the chest, a dry tickling cough, some slight difficulty of breathing, and a hard jerking pulse. At other times it is ushered in with shiverings, coldness of the extremities, pains in the back and loins, flatulency, costiveness, and lassitude. The blood which is spit up is sometimes thin, and of a florid red colour, and at other times it is thick, and of a dark or blackish cast; nothing, however, can be inferred from this circumstance, but that the blood has lain a longer or shorter time in the chest before it was discharged.

"It seldom takes place to such a degree as to prove fatal at once; but when it does, the effusion is from some large vessel. The danger, therefore, will be in proportion as the discharge of blood comes from a large vessel or a small one, and as the quantity is profuse or trifling. When the disease proves fatal in consequence of the rupture of some large vessel, there is found on dissection a considerable quantity of clotted blood between the lungs and pleura, and there is usually more or less of an inflammatory appearance at the ruptured part. Where the disease terminates in pulmonary consumption, the same morbid appearances are to be met with as described under that particular head, etc. As the general symptoms of this complaint is laid before the reader, we shall in the next place proceed to the treatment of the same; The first thing necessary is to produce that regular action of the lungs that nature requires, this may be done by astringent medicines such as the following:—Take half an ounce of pulverized cinnamon bark, the same of gum kino, the same of cubebbs, add these articles together in one pint of alcohol, let it stand for three days, the patient should take of this a half a teaspoonful three times a day combined with honey, this course of treatment should be pursued for several days. The patient should also take, a teaspoonful of sweet oil every morning combined with two grains of loaf sugar and five drops of laudanum, the constant drink should be a weak solution of cream of tartar combined with small portion of sugar of lead, if the bowels are costive the patient should use the tincture of aloes, or a strong tea of peach tree leaves, should there be any fever bleeding will be also necessary. If the stomach appear weak and much debilitated, a few drops of elixir vitriol should be used in a little weak tody two or three times a day. A small pill of opium may at times be taken. The head should be frequently bathed in cold water. The diet should be very limited, etc. I have laid down a few prescriptions and if the patient attends to them strictly he may be relieved."

Dr. Selman was at times a close observer, but very frequently essential and even obvious facts were invisible to him. This certainly is not strange, for the same thing happens even in "this know it all day".

Our author gives a long chapter of twenty-two pages on "The Diseases of Pregnancy". His descriptions show he was not a poor observer, and had extended experience. He warns against taking cold and becoming constipated.

"Toothache," he gravely says, "is painful and irritating and is to be feared". He prescribes oil of cloves and other essential oils to relieve, but says nothing about extraction, and is, of course, silent about treatment and repair by filling with gold or other materials, for modern dentistry was in swaddling clothes in his day. He directs—"When peculiar longings arise in a state of pregnancy, they should always be gratified if possible, as women are apt to miscarry from the anxiety these occasion, when not indulged in them: but that the child in the uterus can be marked by any depraved appetite of the mother, be mutilated by any disagreeable object being presented to her, can not be admitted. All aberrations from the usual form ought to be ascribed to the irregular operation of the powers concerned in generation, and are not produced by the imagination of the mother". If Dr. Selman arrived at this conclusion from his own observations he is certainly entitled to credit, for in his day the general idea in medicine as well as among the laity was that acquired characters were inherited and that awful sights seen by a mother might mark her child.

Mr. George Pence, of Columbus, who discovered Selman's Guide, says: "The book is highly impractical in these days, for its prescriptions call for whiskey, French brandy and gin, and the distillery over on Haw Creek and the one at Tannehill's are not making full time as in 1836."

The classical chapter of the book is entitled "The Cramp Colic". His description is graphic, even startling. He says: "The cramp Colic cramps the stomach and draws the patient sometimes nearly double with violent pains all through the breast, and will roll through the bowels like goose eggs, and sometimes goes off with a lax, a discharge of wind up or down before the patient can get any ease." For the cramp colic our "yarb doctor" prescribes parched peas eaten freely, also a gill of dogwood berries boiled in a quart of water down to half a pint. He remarks "this is wonderful and so is a large burdoc leaf in a quart of water boiled down to a gill and drank".

Costly colic treatment for the present time would be the last prescription: "take a young shoat and cut it open in haste and obtain the gall and drink it." Of his last prescription he says: "But of all medicines I have ever used is garlic boiled in new milk, this often relieves the quickest of any remedy that I have ever tried."

This chapter is fittingly closed with a stanza of rhyme as follows:

"This disease is very bad,
And cramps the patient up;
And if a cure can't be had,
You'll soon be drawn enough."

Dr. Selman, after giving his remedies for toothache, ends this chapter with the following effusion:

"I am sure this will cure,
If properly applied;
It's not hard, for to endure,
It's been frequently tried."

Only a few chapters of this interesting book are adorned with poetry and one more quotation will seal in our minds the poetical sweep of this early medical writer. At the end of the chapter on Scrofula or King's Evil, over which he claims complete control, is found this:

"Afflicted patients with this disease,
Have often come to me for ease;
(Tho much distressed have been their case,
I have never failed in curing them.)
I have never failed in curing all,
Who to me have made a call."

It seems that only one edition of Selman's Indian Guide was ever published and the price is not given.

"THE PHYSICIAN"

HOW MAY HE GROW OLD GRACEFULLY?*

FRANK B. WYNN,
INDIANAPOLIS, INDIANA

In the evolution from infancy to old age, man passes through several distinct physiologic periods, each dominated to a large extent by rather characteristic mental or emotional traits. The instincts govern infancy in great measure. In childhood the imagination runs riot, the growing nerve centers not yet having acquired the faculty of properly analyzing and interpreting afferent impulses coming through the senses. Hence the imaginative desires call for fairy tales, the barbarous exploits of Indians, or pirates. Very different indeed, but just as distinctive, is the epoch of adolescence, when the over-weening sex-ego asserts itself. This is the heroic or castle-building period when the young swain writes in verse his adoration of the female counterpart who chances his way, craving the ecstacy which her praise will bring. Next comes the dynamic period of life when maturity pushes youth aside and says: "I'm a man. Give a real task to perform." These are great days when a man is in the making. Hope leads on whilst brawn and nerve do the work. So for better or for worse he strives while the slow oncoming years stingily reveal

(*) Last of a series of articles by Dr. Wynn which have appeared regularly in THE JOURNAL.

their rewards or failures. In a few years he strikes his gait, thence passing along the fastigium of his career conscious of power and influence, or lagging and discouraged because of failure. This is the long, work-a-day period which tells of triumphs or defeats. It should be the harvest time of life—material, mental and moral. Sudden rise to success in this period is apt to beget arrogance and conceit, harmful to subsequent progress. Better steady growth upon a carefully constructed foundation —a life of activity which mellows gradually into an attitude of stimulating and helpful reflection.

And now comes the last physiologic stage—the period of failure in power, mental and physical. At all events so frequently do these weakening physiologic activities appear, that the world by common consent has come to speak of old age as the period of senile decline. Must we needs accept senile decay as inevitable, unpreventable? As physicians have we not been entirely too prone to accept a stupid, irritable, and useless old age as an unavoidable misfortune calling for pity and forbearance? In passing along the gamut of life's changes should it not be possible so to shape our conduct that each period will attain its full fruition? Let our actions always be attuned to the consummation of a satisfying old age; not a thing to be dreaded, but a calm and serene sunset, glorious in its coloring, wise in its counsels, fine in its dignity. Who has not occasionally seen persons who have thus passed into a green old age? Have we not looked upon them and secretly hoped that such benign and hopeful serenity might settle upon our brows; that their steadfast faith and luminous hope might in like manner brighten our eyes as age dims the sweep of vision. Can we do aught to bring it to pass? This should constitute one of the finest aspects of far-seeing preventive medicine, so shaping the lives of men that toward the end, instead of inert gloom there should be freshness and fruitfulness. Not to all can such a happy consummation come, but their number might be multiplied a thousand-fold.

The purpose of the present discussion is more particularly to apply what has gone before to our own profession. Who has not observed again and again the physician who has spent an arduous and self-sacrificing life suffer in his old age the melancholic realization of diminishing business; heart-breakings because formerly devoted patrons are deserting him for the younger generation of practitioners; the embarrassing and saddening truth beginning to dawn upon him that the community will soon mark him as a "back number". Under the clouds of waning practice, powers and accumulating discouragement he is not able to envision new fields which he can cultivate. In truth so devoted has he been to professional labor that he is unfitted for anything else. All other forms of activity are strangers to him. In gloom he casts about for something to which he can lay his hand with interest and the consciousness of usefulness to the community.

The physician who would grow old gracefully must begin early. Throughout his career he is sowing seed which in his old age will mature as a repellant thorntree of cynicism and despondency or a tree which will bear the good fruit of contentment and usefulness. Very important indeed is it to acquire the right psychological attitude toward the whole problem of medicine. Whatever bent is pursued with vigor and tenacity can but exercise an important influence over the declining professional career. If the mastering passion is for "big business" and money getting to the exclusion of medical study, professional cooperation and genuine service to one's fellows, it may be sowing for a whirlwind at the close. The public, quick to acclaim the practitioner's business success, will be just as quick and quite unsympathetic in proclaiming a younger hero. Whether animated by mercenary motives or professional ambition the tendency is toward the same end. Quite a few operative surgeons belong in this group. In the long run they are apt to present a pathetic picture. Younger men come rapidly to the fore, in competition, writing papers and in other ways pushing for legitimate recognition and professional prestige. Capable and up-to-date or not, the senior practitioner will sooner or later find that he is losing his grip. He refuses to admit that the public is calling for younger men. With galling embarrassment he notes business going to others. He is very prone to become cynical and pessimistic. Such examples are not at all rare. Let the man who is in the midst of large practice remember that his day will soon pass. He should look forward to this change in his career with cheerful resignation, yielding to the younger generation with becoming grace. It will be better for his business but what is still more important it will contribute to his peace of mind.

Let not the argument just offered be construed as opposed to sound business principles. Industry and honest economic thrift in medical practice as elsewhere, constitute praiseworthy virtues. No weightier responsibility rests upon the shoulders of the active practitioner than the obligation to his own flesh and blood—the making of financial hay while the sun shines; the laying aside for a rainy day and old age. Besides frugality in habits this implies the keeping of orderly accounts, the charging of adequate compensation for services rendered, and the systematic collection of moneys due. It should

comprehend the carrying of sound life insurance—as family protection or as a safe investment. With a view to a permanent income during his declining years the far-seeing practitioner should early acquire the habit of putting aside definite amounts at regular intervals in conservative investments—preferably well chosen real estate, rather than those enterprises which fascinate with the prospect of large returns, but are attended by serious hazard. That medical men of high intelligence should occasionally be duped into the purchase of mining, gas or oil stocks would be ludicrous were it not so often disastrous to their hard-earned accumulations. Better a stable investment insuring certain if modest income than gamble for larger returns likely to prove a losing venture which will place upon old age a crown of thorns.

The cultivation of a habit of friendly cooperation with professional colleagues will prolong the fastigium of one's professional activities. There will arise less of the frictions, heart-burnings and disappointments which beget in advancing years a state of senile irritability, a sort of grouch against everything and everybody. In its stead will arise a bearing of good-fellowship and mental poise conducive to happiness, health and long life. But the finest rejuvenation for the aging physician comes from comradeship with young medical students and the younger generation of practitioners. How desirable, how important for each that there should be here a better understanding! On the one hand what harsh and irreverent conduct is that in a young man who cynically speaks of his senior colleague as a "moss-back"—heaping upon him ridicule and contempt because he fails to know some of the newer revelations of medical research and practice. How thoughtless and shortsighted in his reflections, for will not he some day be accounted a "back number"? Nor is a young man's ridicule any more to be excused than an old man's contempt. The point at issue is to emphasize that each should recognize the physiological transformations which take place. Both should be comrades sharing in the labor, the spirit and the cause of progressive medicine. True, the senior may not seek to do the technique of the laboratory or operating room, but he will be made younger and more alert by knowing about it. The junior member will learn from elder counsel the art of managing men, of understanding friendly service and psychological control, which look upon man as more than a machine. Such contact brings about reciprocity of the most elevating form—making the young wiser and putting into age the fire of youth and hope.

To grow old with equanimity requires patience, courage, charity for human shortcomings and abiding faith in one's fellows. With the period of old age nearing, we protest against its approach. Ostrich-like we hide our heads and try to make believe it is not the real thing. Thus coddling ourselves into the false view that we can do just as we used to, we fail in measuring up to our former standards, and of necessity fall below newer standards established. It were better to acknowledge that a different physiologic period has supervened and try to adapt ourselves to the obligations of a new order. In the early years of life we are expected to do childish things; but when we have crossed to the realm of full maturity we should put aside childish ways. Failure is the penalty if we do not obey this law of change.

Just as natural and real is the transition from the long and active fastigium of life's stresses to the quieter period of age decline. I protest against this always being classified as a retrogressive stage of human existence. True it may signify retrogressive and degenerative alterations in blood vessels and various organic structures; but let us not forget that progressive advancements are possible then in some of the finest mental and moral qualities of human accomplishment—the beautiful things of the spirit which may bless just as abundantly as any of the so-called practical qualities of active professional life.

The gradual transition from an active practice to what should be the more serene but not less useful period of advancing age means the giving up of many arduous duties and responsibilities. It is right and best that they should be surrendered to others. Let it be done without grudge or criticism. Sad to relate many physicians, and especially surgeons, seem incapable of doing this. They refuse to understand why patrons, once so devoted to them, are now turning to younger professional men. A higher conception of duty and even the practical philosophy of their own interest call for cheerful resignation to the changing physiologic conditions.

Equally important with giving up the old order is to be able to adapt one's self to the new of the declining age period. For years before, the far-seeing physician should have been evaluating his capacities with a view to preparing himself for efficiency in the old age period. Unfortunately most men, during the hey-day of professional activity, seem to consider that it is only necessary to put by funds for shelter, food and raiment; but is not the more important thing to plan to have something to *do* in declining years, which will satisfy the soul? The real man draws back at the thought of rusting or rotting. He would be a hero and die in the harness.

Resigned to give up active medical or surgical practice, the question is what may be

undertaken as a substitute to hold mental interest, arouse enthusiasm and give the consciousness of useful service? A brilliant light along the pathway of advancing age is always to be found in children. Happy should be the physician, therefore, who has children or grandchildren, with whom he may share comradeship—rejuvenating to him as it will be delightful and instructive to them. This is really nature's order—going back to the things which were a joy in early life. If children are not to be found in the family, then it should be the duty and pleasure of the aging physician to cultivate their companionship elsewhere. Abundant opportunities exist for the development of this rejuvenescence—in hospitals, orphan asylums, fresh air missions, schools, boy-scout organizations and the like. Frequent and wholesome contact of the right kind of elderly people with children constitutes the finest and most useful sort of social service—a type of psychologic training which cultivates reverence for old age, a thing too often neglected in our day when "Young America" is prone to shun the aged as crotchety and unsympathetic.

The cultivation of a habit of recreation is a duty which every physician owes to his patients as much as to himself. Rotation and variation in the stressful routine are just as necessary to his highest productive efficiency as rotation in crops is essential to fruitful production in the fields. Under a false conception of duty to patients too many allow exhausting activities to wear out their own mental soil. How necessary, therefore, the practice of wholesome recreation—the kind which rests, rebuilds, puts coloring and dynamics into the psychological realm of one's nature. Consideration of these matters in the proper season of life begets an enduring nervous constitution which functions with vigor and interest far beyond the accustomed span of years. Recalling those in the profession who have profited by this recreational philosophy, memory pictures some of the finest types of physicians who in their declining years have gone in pursuit of the finny tribe—ambling along mountain brooks in search of the shy trout, or gliding over lake in quest of the furtive bass or the gamey muskellunge. Who has not frequently seen the aged physician of this type, fresh from an excursion into the open; his youth renewed, his eyes glistening with delight as he recounts the experiences of his outing. But if one would reap the benefits of such wholesome sport in old age, he must develop the skill and love of angling early in his career.

For the busy practitioner's annual vacation, no form of recreation is more popular than travel. Physicians are excellent travelers. Aboard ship or on a great transcontinental train where the force of circumstances throws people together and brings to pass oftentimes the most delightful acquaintanceship, it generally transpires that a physician will be found in the group. Furthermore he is very likely to be reckoned a favorite in the party. His life-long mixing with all classes has trained him how to meet people and situations. His powers of observation have been made acute so that nothing of unusual interest escapes his attention.

Upon matters of scientific bearing his opinion is likely to be sought. He understands the laws of practical psychology and comradeship. His intelligence and adaptability make him a favorite. On his own part travel is most enjoyable. He can cheerfully accept disagreeable situations, turning misfortune into comedy—a rare gift.

Finally the physician as a traveler brings to his home environment the benefits of his sojourn abroad. He is eager to apply the knowledge gained to community improvement, whether it be in educational methods and equipment, improved streets, adequate and artistic public buildings, park development, playgrounds for children, more beautiful trees, flowers or comprehensive city planning. It has always been a matter of extreme pride to me how frequently physicians who have seen the world, exhibit the capacity and disposition to apply the knowledge thus gained for municipal or community betterment. It is a fine exemplification not only of good citizenship but of the wise application of principles which will be conducive to happiness and longevity.

Of the recreations regularly available for city practitioners, golf is perhaps the most popular. It fulfills the requirement of good hygiene, excellent sport, and delightful companionship. Age makes no distinction as to its votaries. It is worthy of remark what a large number of older men, even those of advanced age, become quite enthusiastic over the sport. Physicians should acquire the golf habit early as preparatory to the spirit and freshness which it will add to declining years.

Agriculture, horticulture or floriculture as business enterprises are not advisable for physicians retiring from active practice. At any rate to carry large undertakings of this character to successful issue will exhaust rather than rebuild and prolong life. On the other hand if they are entered upon in a small way, as recreative pursuits and not as business enterprises, they are commendable.

This thought suggests nature study as a recreative and rejuvenating activity for elderly physicians. Wherever in America the research student of history goes he will find the physician was a pioneer of fundamental scientific teaching in the community. In the offices of the doctors of the old school who still linger to bless their respective communities, there will often be found a collection of archeological or

geological specimens, some of them surprisingly complete. In the earlier days long journeys on horseback through virgin forests, over rugged hills and along stony creeks gave ample time for meditation and observation. An interest in natural phenomena was forced upon the physician. He became the authority upon trees, plants, wild flowers, and fossils; on the habits of bees, bugs, birds and animals. I would make earnest appeal for a revival of interest among physicians for nature-study; first of all for its hygienic, and instructional value throughout one's career, but especially for its beneficent influence in bringing to pass a green old age.

Sudden transformations frequently take place in the inorganic world, as earthquakes, storms, flood and fire. But where life processes go on, the method is imperceptibly slow. Particularly if the vocational energies have been for long very intense, nature protests against sudden cessation. For example if the athlete or prize fighter, trained to the limit, suddenly halts in his activities, he becomes rapidly soft and is quite prone to degenerative weakening. Similarly I have seen the hard working farmer at sixty, sell his land, move to town, begin a period of idleness, over-eating and under-exercising, and start rapidly down the disease toboggan, developing arteriosclerosis, hypertension, chronic cardio-renal disease with their multiplying sequellæ.

As in the case of physical pursuits, so in the mental realm, sound physiology counsels against sudden cessation. How shall we apply the same principles to the practice of medicine? Not a few practitioners who have pursued an intensive career up to the sixth decade, and have laid by a competence for the rainy day and old age, suddenly abandon medical work. With conscious pride they announce to the world that they have earned the right to ease and rest. Instead of the coveted relaxation and contentment, restlessness and dissatisfaction drive tension up. If according to one's scheme, medicine is to be completely abandoned (and such a course is often advisable), then plans must be carefully devised to occupy interest, give the consciousness of usefulness, and afford a certain amount of physical activity as well.

The physician's training and association with all classes and conditions of men fits him for understanding their psychology—their virtues, weaknesses. His knowledge of biology, hygiene and sanitary science prepare him in an unusual way to grapple with civic and public health problems and enables him to advise wisely in their solution. Naturally and logically therefore he should and does often fall into positions of public trust. Frequently it should be the duty and pleasure of the physician, during the terminal phase of his career, to serve upon Boards or Commissions concerned with Public Health, Education, Park Development, Recreation, Civic Improvement, Charity, etc. Such work constitutes one of the finest and most serviceable forms of activity in which he may engage. I have known several such who have rendered a conspicuous public service, incidentally honoring the profession. The inclination of some men to enter politics after retirement from practice is rather a dangerous experiment, for the uncertainties, irregularities and intensities are almost as harassing as professional work.

Every physician should cultivate early the habit of good reading, literary as well as medical; less of the daily, sensational trash and more of standard literature; always the best and most recent medical books and periodicals. During the period of active professional life good reading is a necessity if one would keep pace with progress. Its benefits never cease. For those who have passed the biblical allotment of years, what a storehouse of pleasure and companionship is found in good books! They offer the geniality of old friends and the interest of new ones. They keep the faculties burnished when otherwise they would rust. Thus from retained freshness and accumulating knowledge such physicians radiate a helpful influence everywhere. To children and youth they become inspiring companions. Reciprocally they receive from the young a benignant and life-lengthening tonic. These are physicians who learn the art of growing old gracefully.

Very fallacious is the view too generally entertained, that physicians in the terminal decades of life should neither study nor write. Let the senior practitioners of medicine awaken to their serious duties and responsibilities toward the profession. More particularly would I urge the obligation to history. The foundations of all future progress are laid upon history. Medico-historical research is an inexcusably neglected field. Let not those who take vain pride in doing a large practice flatter themselves that future generations in medicine will care much for this fact. In truth the future is more likely to give its meed of praise to the man who in his declining years records with faithfulness the story of prevailing epidemics; describes the course of public health movements, the rise and decline of isms and cults, and the medical fashions of the day; narrates incidents of medical sacrifice and heroism and carefully prepares the biographies of medical men who have lived in the region; collects, preserves, and describes medical relics.

Illustrating the appeal here made, Indiana has produced a striking example in the person of G. W. H. Kemper of Muncie. However fine may have been his career as general practitioner and obstetrician for fifty years, this service has not equaled in value to the profession the labor he performed after seventy, delving into the

life history of almost every doctor who has practiced in Indiana. What interminable patience it required but what a splendid reward in the gratitude of the profession and the beautiful volume produced. His example is worthy of general emulation. Are not the worth-while achievements and heroic deeds of medical men as much entitled to historic record as the lives of the captains of industry, the princes of wealth, the idols of shifting political life or the heroes of battle?

Behold how great is the reward of the faithful in medicine! The cup of the well-rounded physician's life is full to the brim with precious memories of friends. His acts of sacrifice and heroic devotion are glorified by the gratitude of aching hearts, and in the brightness brought to downcast eyes. Perchance his labor may have revealed some new scientific truth, or devised a better method of treating disease. Let the stream of his life flow on, bearing upon its current the buoyant craft of human service until it floats into the sea of eternity. Thus in the journey toward life's end, his paths will be those of peace and his rewards those of the just. As the prophet of old spake, so will it be said of him today: "The skill of the physician shall lift up his head and in the sight of great men he shall be praised." (Ecclesiasticus xxxviii:3).

THE END

CHAULMOOGRA OIL IN TREATMENT OF TUBERCULOUS LARYNGITIS

This report by R. M. Lukens, Philadelphia (*Journal A. M. A.*, Jan. 28, 1922), gives the results of sixty cases of tuberculous laryngitis treated over a period of eight months with chaulmoogra oil. The treatment was conducted more for the purpose of learning the effects on the pathologic lesions of the larynx and the symptoms than on the tubercle bacillus itself. Chaulmoogra oil gave promising results from the beginning in cases in which there were dysphagia and pain in the throat. In the majority of cases it exerted an analgesic action on the larynx, which became more complete after repeated treatments. While improvement in the lesions is slower than was hoped for, yet cases treated with chaulmoogra oil have responded as rapidly as those treated with other drugs, and the treatment is much more easily borne. Preilminary cocainization has not been necessary, and there has been no pain or discomfort in the throat afterward, but rather a pleasing sensation of warmth in the throat and chest. In the cases in which intratracheal injections were made, sputum was rendered more fluid and was expelled with greater ease. Dryness of the throat, which frequently is present in tuberculous laryngitis, was improved but slightly in the majority of cases. At first the oil was applied by means of a cotton tipped applicator saturated with a 10 percent solution in liquid petrolatum directly to the laryngeal surface. Later the strength was increased rapidly up to the pure drug. Chaulmoogra oil works best by intratracheal and intralaryngeal injection. One cubic centimeter of the oil, of the strength desired, usually 10 or 20 percent, in liquid petrolatum or olive oil, is drawn up in a Luer syringe armed with a metal eustachian catheter. While the patient holds the tip of the tongue, wrapped in a paper napkin, between the index finger and the thumb of the right hand, the syringe tip is introduced, guided by the throat mirror, into the pharynx (not the larynx) above and behind the epiglottis, care being taken not to touch any portion of the mouth or throat. Two-thirds of the contents of the syringe is discharged, drop by drop, into the trachea while the patient breathes quietly. The remainder is then dropped on the cords while the patient phonates. In this way, cough following injection is very slight and often absent. When present, it occurs within five minutes after the injection and lasts for a minute or two.

DELETERIOUS EFFECT OF BLOOD TRANSFUSION

It is stated by Lester J. Unger, New York (*Journal A. M. A.*, Dec. 31, 1921), that biologic tests demonstrate that the transfusion of whole, unmodified blood is of far greater value than that of citrated blood. Sodium citrate, even in the low percentage employed in a citrate transfusion, affects the red blood cells, rendering them more fragile. The value of such blood to a patient suffering from a hemolytic disease, such as pernicious anemia, is lessened to that extent. Sodium citrate diminishes the available quantity of complement in two ways: by its direct action on complement itself and by introducing into plasma an anticomplementary substance which fixes complement. This substance is obtained directly from the bodies of red blood cells. Sodium citrate also reduces almost to nil the function of opsonins, and practically destroys the phagocytic power of white blood cells. Furthermore, the phagocytic index of the blood of various donors differs. Since complement and the phagocytic power are of prime importance in the protective action against pathogenic organisms, whole unmodified blood from a donor with high phagocytic index should be employed when attempting to combat local or general infections by means of transfusion. In selecting a donor, attention should be paid to the finer qualitative differences in the blood.

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EDITORIALS

VACCINES IN WHOOPING COUGH

In a recent article Appel and Bloom of New York City have given an excellent resume of the work done in the treatment of pertussis with vaccines. For some thirteen years the discussion has gone on—more or less half-heartedly through lack of sufficient enthusiasm on the part of its protagonists rather than because of any opposition. Briefly their position is this—that the use of a vaccine is logical because of the infectious character of the disease and because it produces a low grade toxemia; that its value is greater the earlier it is used and that it should be a mixed vaccine since the bacillus pertussis is always accompanied by secondary invaders. They recommend a vaccine containing per cubic centimeter

Bacillus pertussis	1,000,000,000
M. Catarrhalis	200,000,000
Staph. Aureus	200,000,000
Staph. Albus	200,000,000
Streptococcus	200,000,000
Bacillus Influenzæ	400,000,000
Pneumococcus I	50,000,000
Pneumococcus II	50,000,000
Pneumococcus III	50,000,000
Pneumococcus IV	50,000,000

The dosage advised was ½, 1½ and 2 c.c. given intramuscularly every other day.

Study of the statistics quoted as well as their own results justify their support of this form of therapy. As they suggest, its value particularly as a prophylactic must not be lost sight of merely because it is not 100 percent efficient. If as results seem to indicate the average duration of the disease is reduced to 30 days, its severity mitigated, the number of complications reduced and the mortality lessened, the use of vaccine therapy, at least as an adjunct to other methods of treatment, needs no further recommendation.

PATERNALISTIC MEDICINE

At the present time the medical profession is confronted with some very grave problems upon the solution of which depends the very life of the profession. It is unfortunate that various forms of socialistic, paternalistic or communistic medicine have been proposed by some of the leaders of our profession, and it is equally lamentable that these propositions have been supported in a perfectly innocent way by a few members of the medical profession who have not analyzed the situation sufficiently to appreciate the dangers that threaten if we adopt such a policy as proposed. In short we are not only heading toward bureaucratic medicine, but we are heading toward the extinction of the medical profession as a profession and the abolition of private practice. We appreciate the fact that some easy going individuals consider this an alarmist statement, but such is not the case. Already we are adding to the functions of federal, state and municipal agencies which have to do with the recognition and treatment of disease conditions, always widening the scope of the work and increasing the activities so that they encroach upon the private practitioner of medicine. Along with this we see our hospitals and institutions of learning encroaching upon the private practice of medicine through our free clinics, and their newest activity—the community clinic—separated from but under the control of these institutions. All of this means but one thing and that is a drift toward state medicine, a term as used by us meaning the practice of medicine in any of its phases under the patronage and control of federal, state or municipal authorities and in direct competition with the private practice of medicine. Some may say, "Well, what of it? Wouldn't it be better to have our sick and disabled population under medical care and treatment by the state with its abundance of capital and resources than under private service with all of its limitations?" To this we answer emphatically, "No!" Practically every activity of the government, whether federal, state or municipal, is the football of politics. The practice of medicine would meet no better fate. It would functionate first, last and all the time through political preferment, and political preferment never has and never will depend upon capability or efficiency, but depends upon expediency. The regular medical profession as it exists today, with its long record of scientific advancement and wonderful achievements in the recognition and cure of disease, would have little voice in shaping the policies of medical service under state control, for the pseudo-medical cults and all of their followers, including the ignorant and gullible, would not only far outnumber us and bring more political pressure to bear but they really would be more active politically than we ever have been or could ever hope to be in view of the natural repugnance we have for political activity. It is bad enough to have our governmental agencies so frequently in the hands of incompetents, but it would be still worse to

place the lives and health of our citizens into such hands, and that is exactly what would happen if the practice of medicine was placed under state control and thus made the football of politics. We have been quite content to support state medicine which has to do with public health matters as controlled and regulated up to the present time, but we are unalterably opposed to the widening of the scope of this work so that it includes any and all phases of the practice of medicine, as we also are opposed to lay domination of or dictation concerning the management of our hospitals, teaching institutions, clinics, or any phase of medical practice.

NATIONAL HOSPITAL DAY

May 12 has been designated as National Hospital Day, and hospitals all over the United States and Canada, and even England and Australia, are planning to observe the day with programs of various sorts.

Last year about 1,500 hospitals in the United States and Canada observed the first annual Hospital Day, and aside from educating the public regarding hospitals and all phases of hospital service, it is reported that as a direct result, many applicants for the nurses' training schools and many donations of supplies, equipment, and money were received.

The success of this project last year is an inspiration to greater effort this year. Dr. George F. Keiper of Lafayette has been appointed chairman of the National Hospital Day project for Indiana, and it is hoped that every hospital in the state will cooperate and make Indiana 100 percent in the observance of the day. Some suggestions for a program for the day are given herewith: Open house for the inspection of the institution and nurses' home; graduation exercises for nurses; exhibition by x-ray, dietary, laboratory, occupational therapy, social service, and other departments; serving of luncheons to clubs, business men and similar groups; luncheon for public, for which charge is made; distribution of literature and buttons; pageants by nurses, or by children under the direction of some local organization; baby show for infants born in hospital during past two years. Tactful guides should be provided to take visitors through the buildings. Pamphlets describing the various services rendered by the hospital, and giving some facts concerning its work, might be distributed. Special emphasis should be given to the value of nursing as a profession. A general meeting, addressed by some prominent medical or lay man might be planned for the evening, and if the nurses of the institution have a chorus, glee club or orchestra same could be used to advantage. Socially prominent trustees or members of women's auxiliaries might arrange a ball, the proceeds of which could be devoted to some special work of the hospital. Publicity is a most important factor. Endorsement should be received from the governor of the state, mayor of the city, American Legion, etc., etc., and publicity may be distributed by churches, schools, fraternal organizations, theaters, business organizations, and, last but not least, the press.

Information or advice may be obtained by writing to Dr. George F. Keiper, Lafayette, Indiana, state chairman, or Matthew O. Foley, executive secretary, 537 S. Dearborn Street, Chicago.

MEDICAL POLITICS

It seems strange that almost without exception the members of the regular medical profession overlook the effect of politics in attaining anything for the common good. They do profess to be interested in regulating the practice of medicine, in increasing the standards of medical education, and promoting everything that has to do with public health and sanitation. However, whenever proposed legislation concerning any of these matters is introduced in congress or in any of our state legislatures, how many doctors show any interest in the pending legislation by using their influence in behalf of the legislation or in breaking down opposition? On the other hand, the pseudo-medical cults, including the chiropractors, Christian Scientists, and all other opponents of regular medicine, put up a united front in opposition to every bit of legislation that offers hope of improving public health, medical education and standards for the practice of medicine, or anything else that has to do either directly or remotely with the prevention and cure of disease. It is freely remarked by senators and representatives in congress that a bill having the slightest reference to medical affairs calls forth hundreds and even thousands of telegrams and personal letters from members of the pseudo-medical cults, and scarcely no attention from members of the regular medical profession. Not only do these pseudo-medical cults use their own influence but they get their friends and acquaintances interested to the end that our legislators either in Washington or at the state capitols are led to believe that the sentiment so freely expressed constitutes the prevailing sentiment among constituents, and it is easy to vote that way, irrespective of what the private opinion of the legislator may be. As an instance of this activity, we call attention to the public health bill introduced in congress by Senator Watson, which should have the support of members of the regular medical profession. So far as we can see, the bill has no objectionable features, but it does provide for the appointment of a few medical officers as permanent members of the Public Health Service, and probably some of the pseudo-medical cults would like to feed

at the public crib so they are vigorously opposing the bill and making their sentiments felt by hundreds of telegrams and letters to Senator Watson from Indiana alone. In the meantime less than a dozen members of the regular medical profession of Indiana have written Senator Watson concerning this bill. As has been stated by legislators on more than one occasion, it is difficult to secure much needed medical legislation when doctors are so apathetic concerning it, and so seldom show enough interest even to take the trouble to write or telegraph their legislators concerning their attitude. It is both disappointing and discouraging, and yet doctors howl the loudest because such legislation is not effected. To use an advertising slogan, "There's a reason."

"FAIR PLAY TO THE PUBLIC"

An editorial in a recent issue of the New York *Evening World* commented on an investigation that had been made in New York in an attempt to test the quality of "chiropractic" knowledge. Normal individuals went to certain chiropractors, gave fake symptoms, and the chiropractors "discovered" subluxations whose presence defied the roentgen ray. The *Evening World* very properly pointed out that, possibly, if normal individuals went to reputable medical practitioners and reported fake symptoms, physicians themselves might "fall down" on both diagnosis and treatment. As a result of this comment, the *Evening World* received a number of letters of approbation from the chiropractors, in one of which the writer commended what he termed the paper's "policy of fair play to the chiropractors". The *Evening World* came back with an editorial whose title we reproduce in the caption. This editorial contains so much sound sense that we make no apology for reprinting it practically in full:

The *Evening World* is vastly more interested in a policy of fair play to the public.

Fair play to the public would, we believe, eliminate 90 percent or more of the present practitioners of chiropractic.

Fair play to the public would require adequate education of chiropractors—for example, a regular medical course plus the specialized postgraduate work expected of a specialist in other fields of medicine.

In such a course many would-be chiropractors would come to the conclusion that manipulation of vertebræ is not a cure-all, whatever its possibilities.

Fair play to the public demands that chiropractic processes should be used only by men who know thoroughly what they are doing and why. Both common sense and science deny that all ills are traceable to the spine.

Fair play to the public demands a strict curb on a great mass of quackery masquerading under the name of chiropractic. Fair play to the public would send a substantial percentage of chiropractors either to school or to jail.

Adequate education might develop some competent healers of a limited group of diseases from the crowd of incompetent meddlers. But, given education, it is probable most of them would cease to be chiropractors.

Jour. A. M. A., April 1, 1922.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

CERTAINLY there are grave problems confronting the medical profession today and they have to do with the very life of the profession. That these matters may come up for discussion at St. Louis seems very probable, and it is hoped that a constructive program will be adopted.

SOME rare bargains in instruments or surgical supplies oftentimes are offered in our advertising pages, to say nothing of announcements that are of interest to members of the medical profession. Probably our readers do scan the advertising pages but if not it will pay them to do so.

ACCORDING to the United States Census there have been very few deaths from smallpox in recent years, and the Census Department attributes this decrease to vaccination. In evidence of this, it is pointed out that the unvaccinated population is the one that suffers most from smallpox. Just how the antivaccination society is going to get around these government statistics is a question, but probably in answering they will use the slogan started by *The Journal of the A. M. A.*, "Figures don't lie, but figurers do".

How many medical men are going to exert their influence at the primaries in having suitable candidates for the legislature selected? How many medical men realize that only a little work in the selection of candidates does away with the necessity of a whole lot of work later on in the legislature in trying to offset the pernicious influence of legislators who never should have been permitted to come up for election? This is a matter for serious consideration, but

with the characteristic indifference of medical men we doubt if it will receive a second thought.

OUR State Association has a substantial bank account and is able to provide funds for any enterprise that is of direct value to the medical profession of the State. We are interested in wise medical legislation for the protection of the public as well as for the general advancement of medical science, and the Association has made provisions for funds that can be used in securing such legislation. Why wait until the legislature convenes before using some of that money? Why not begin the political work at the primaries or even before that? A dollar spent in political work sixty days ago would be worth one hundred and perhaps a thousand dollars when the legislature is in session. "Penny wise and pound foolish" certainly applies to politics as well as anything else, and this whole question of medical legislation is a matter of politics.

THE State of Florida, under the direction of Health Officer Dr. Raymond C. Turck, has established a public radium clinic for the treatment of cancer. In announcing the establishment and aim of this clinic Dr. Turck makes the following statement: "The patient applying for free treatment must be financially unable to pay for any medical services which may be required. Patients who are in moderate circumstances and yet able to make some payment for medical services are *not* eligible for this treatment. It is not the intention of the State Board of Health to enter into competition with private physicians in the treatment of disease." If all public clinics could be established and maintained on that basis there would be an end to this matter of pauperizing the people, and the deserving poor would receive proper medical and surgical services.

THIS year's session of the A. M. A. will be held at St. Louis, May 22-26. It is fortunate that a little earlier date than usual has been selected, for St. Louis is one of the hottest and most uncomfortable places during the time that the A. M. A. ordinarily holds its annual sessions. In May it ought to be fairly comfortable, with none of the hot sticky days that make life unbearable. From all indications there will be an enormous attendance. As usual the programs offer a scientific treat that is attractive, and of course the usual "get-together" and social spirit is a great drawing card. Aside from this there probably will be some interest in the storm that is brewing in medical circles everywhere concerning the tendency toward various forms of socialistic or communistic medicine proposed or innocently supported by some of the leaders of the medical profession.

DR. ALLEN K. KRAUSE, of Johns Hopkins University, recently has called attention to the dangers resulting from promiscuous spitting on the streets and in public places, particularly affecting children who play on the streets, and whose marbles, balls, and other toys are contaminated by sputum. Also, both children and adults have their shoes soiled with such sputum and carry it into the home. It has been said by some of the greatest public health authorities, and by the foremost students of the subject of tuberculosis, that if it were possible to suppress spitting in public places, it would at once effect a very considerable diminution in the prevalence of tuberculosis, pneumonia, diphtheria, whooping-cough and other diseases which are transmitted through respiratory tract discharges. One needs but to glance around on the street or in various public buildings and stairways to note the evidence of promiscuous expectoration and to realize the need of an anti-spitting campaign in Indiana cities and towns.

SENATOR WATSON of Indiana has introduced in the United States Senate a bill to reorganize and to promote the efficiency of the United States Public Health Service. The real object of the bill is not only to provide adequate medical and surgical care for the beneficiaries of the United States Veterans Bureau, and increase the efficiency of the Public Health Service, but also is intended to do away with the temporary commissions in the Public Health Service which are unsatisfactory from every standpoint and are not conducive to efficiency. The Service really needs the addition of 450 medical officers, 50 dental officers, and 50 non-medical but scientific officers, all of whom have been provided for in the bill introduced by Senator Watson. No increase in appropriations is provided, for the reason that no increase will be necessary. The bill simply effects a reorganization of the Public Health Service to meet current needs. As might be expected, the principal opposition to this bill comes from the pseudo-medical cults, and it is hoped that the members of the regular medical profession will get back of the bill in an effort to put it through and thus increase the efficiency of the Public Health Service.

"THE Journal of the Oklahoma State Medical Society, speaking editorially of the training of nurses, holds that a three years' training as a routine requirement is unnecessary.

"There is no good reason why an intelligent woman should be required to give three years of her time in order to master the fundamentals necessary to carry out the orders of the attending physician.

"There is much sentiment of this kind among

members of the medical profession. This sentiment no doubt grows out of the fact of the shortage of nurses who are competent to perform the ordinary duties of caring for patients suffering from general diseases under the direct care of physicians, and on account of the high fees charged which are beyond the reach of a great number of patients. If arrangements could be made which would provide for a one or two years' course of training for intelligent young women and a three years' course for those who desire to prepare themselves for special work, after securing a high school course of preliminary preparation, the public would be much better served than now with a standard three years' course and a large portion of the sick without nurses."—*Journal of the Iowa State Medical Society,* March, 1922.

SOME of our readers may have noticed that some of the life insurance companies, notably the Lincoln Life Insurance Company, makes a practice of sending out questionnaires to all physicians who have attended applicants for insurance, and these questionnaires contain an inquiry concerning the nature of the diseases for which the insurance applicant has been treated, and an opinion as to the effect of such diseases upon the insurance risk. In every instance the giving of this information is classed as a courtesy to the insurance company, but, as usual with insurance companies, no compensation is offered or granted for the time, effort and opinion given, which is purely for the protection of the insurance company. Oftentimes the furnishing of the information requested means looking up old records and furnishing technical advice concerning a patient who has not even paid his bills for professional attention. Even if the bill for professional services has been paid, there the obligation ends, and the attending physician owes nothing more to patient and he certainly owes nothing to the insurance company which, in reality, is the one that profits and is protected by the information furnished. We suggest that the best way to deal with these questionnaires is to throw them in the waste-basket.

From the *Indianapolis Star,* of Thursday, March 23, we clip the following:

HEALTH OFFICER KEEPS SWINE IN TOWN

Fort Branch, Ind., March 22.—Dr. Shaley, health officer here, and four other men were arrested for violating an ordinance passed recently by the town council, prohibiting the keeping of hogs within the corporate limits of the town. When the ordinance was presented many citizens opposed it, including Dr. Shaley.

The health officer and four other accused men appeared in justice's court here today. Their case was tried before a jury, which failed to reach an agreement.

Dr. Shaley, as witness in his own defense, declared that hogs kept within the corporate limits of a town or city are not a menace to health, but are a benefit in that they act as scavengers to keep the streets and premises clean.

If we can place credence in this report, Fort Branch is to be pitied for having a health officer who has such a queer conception of the recognized rules of health and sanitation. Furthermore, it is exceedingly unfortunate that a certain amount of odium attaches to the medical profession because one of its members assumes an attitude so diametrically opposed to all of the teachings of sanitary science which the medical profession upholds. Another phase of the situation is the queer turn of politics which permits or tolerates the appointment of a health officer who is so little in sympathy with the aims and objects of public health work.

"GET WELL IN INDIANA" was the subject of the presidential address delivered by Dr. Eric Crull before the Indiana Tuberculosis Association at its annual meeting on February 24; and "Get Well in Indiana" is a part of the propaganda of the Indiana Tuberculosis Association which it plans to emphasize during the coming year. The mistaken idea that climate alone will effect a cure in tuberculosis induces many people of Indiana and other central and eastern states to uproot themselves from their surroundings and migrate to western and southwestern states without sufficient funds for adequate care and treatment, expecting to obtain light work to maintain themselves. These western and southwestern states are sending out warnings that work of the desired character is not obtainable, that such states have no funds to be used in the care of these individuals, and that untold suffering will result from financial worry and homesickness. It is a proven fact that tuberculosis can be cured right here in Indiana, Illinois, Ohio, etc., just as in Colorado, New Mexico, and California, without the attending financial burden and the necessity of leaving home and friends. Hence the importance of this "Get Well in Indiana" campaign to be put on by the Indiana Tuberculosis Association. A circular dealing with this subject has been gotten out by the Association, and copies will be sent free upon requests addressed to M. A. Auerbach, Executive Secretary, Indiana Pythian Building, Indianapolis.

WE confess that we have been rather disappointed in not having a functionating committee on Industrial and Civic Relations for the Indiana State Medical Association. There are a great many problems confronting the members of the medical profession which ought to be considered by such a committee and recommendations offered for the guidance of the profession.

In this connection we might mention the question of furnishing so much gratuitous but valuable expert information to insurance companies. The profession ought to adopt a definite policy in handling this matter and then stick to it. Another subject of interest is that pertaining to medical and surgical services rendered in industrial cases where the compensation comes from insurance companies. In a large percentage of these industrial cases the doctor is brow-beaten into accepting niggardly compensation, and always because some insurance company is responsible for the claim and will not pay just compensation unless forced to do so. What the medical profession ought to do is to fix its own fees in these compensation cases and not permit insurance companies to do it for them. Furthermore, every doctor should refuse industrial work except under a guarantee by the employers that a just settlement of the account for services rendered will be made. We might mention a number of economic problems that ought to be considered by our committee on Industrial and Civic Relations but what we have mentioned is quite sufficient for a starter.

THE county secretaries are to be congratulated on the successful efforts which they have made already this year in collecting the dues. We now have 2,450 members, which is an increase over the corresponding time last year. It is, of course, the aim of the organization to maintain this lead throughout the year. Reference to the Councilors' membership contest (in another column) will show that the Sixth District, Dr. Spilman councilor, was the first district to increase its membership over last year. This is explained by the fact that out of the eight counties in Dr. Spilman's district, five of them already have 100 percent membership or better. The two lowest in the contest are the Third District, which has only 85 percent of its quota, and the Tenth District, which has 86 percent. The low showing is in a large part due to Washington and Clark counties in the Third District, and to Lake county in the Tenth District. The standing of the county societies shows that Marion County is in first place with 376 members, one less than last year; Vigo County in second place with 105 members, two more than last year; Allen County in third place with 100 members, seven less than last year; Vanderburgh County in fourth place with 91 members, 7 more than last year; and Lake County in fifth place with 79 members, 16 less than last year. At the bottom of the list stand four county societies with six members each at the present time whose memberships for last year were as follows: Whitley County, 19; Johnson County, 16; Washington County, 13; and Warrick County, 12.

A PLAN is on foot in Washington to permit the use of denatured or "premedicated" alcohol in remedies intended for internal administration. In other words, alcohol used in medicine shall be "premedicated" with one or more of the ingredients used in that medicine, and when it is so premedicated, it shall be free from tax. To the average physician, this may sound reasonable and desirable, but when one learns that it is sponsored by the proprietary medicine interests it immediately becomes evident that the matter deserves further scrutiny. Most of the goods of the proprietary medicine manufacturer are sold at fixed prices per bottle. If he can get his alcohol free, that will mean a great reduction in the cost, and a large increase in his profits. On the other side, the pharmaceutical manufacturer who puts out 500 to 2,000 different alcoholic preparations would have to have as many or nearly as many alcohols as he has preparations, instead of three or four formulas of denatured alcohol; he would have to carry an enormous stock of alcohol on his shelves with the attending large capital investment, with no, or at least very little, reduction in cost to the consumer. Further, such a plan would endanger the official standards of preparations, and make the Pharmacopeia a joke. Then, too, the "premedication" would be done in the distilleries, by the distillers' employees, and not by pharmacists and others trained in the handling of pharmaceutical preparations, and thus the scientific control over the manufacture of these drugs would be lost. Summing it up, it seems quite clear that the only one who would benefit by this proposed plan would be the manufacturer of such preparations as Tanlac, Lydia Pinkham's Compound, Etc. The medical profession of Indiana should make it their business to advise the congressmen from this state concerning the dangerous character of the plan.

IF anyone thought that the chiropractors would confine themselves to the manipulations which they call "adjustments", another guess should be made. At the present time the chiropractors are using x-rays, violet rays, radium, high frequency currents, and anything else that will prove attractive to patients and increase fees. This is not all. Not a few of the chiropractors are beginning to use drugs which they dispense themselves and glibly tell the patients are merely to assist in the main treatment, which is "adjustment". In reality it doesn't make very much difference what the chiropractors do or employ, for their sins of omission are as great as their sins of commission when they attempt to treat all kinds of diseased conditions without possessing adequate educational qualifications. However, it is a sad commentary on the judgment of the public when no recognition of fitness is required of those

who are responsible for caring for human lives. We compel a railroad engineer to be thoroughly qualified by education and experience before being permitted to run a locomotive which pulls a train loaded with human lives, and we make sure, through frequent and repeated examinations, that he continues to maintain his efficiency. However, when it comes to assuming the responsibility of a human life that is jeopardized by disease, we throw away all restrictions, forget all the rules of consistency, and permit the ignorant, untrained and inexperienced pretenders to assume the right to care for human life. As we often have said, we care not what system of medicine is employed to treat the disease, providing it has a rational basis, but we do insist that those who are called upon to treat diseases should know the human body in a very general way in health as well as disease, and that knowledge cannot be acquired by the individual who has less than a common school education and attains his title of "doctor" by either a six weeks' or a six months' course in chiropractic training.

CHURCHES are getting down pretty low when they open their doors to medical pretenders for the expounding of unscientific and irrational theories concerning the cause and treatment of disease, to say nothing of giving over the pulpits to an actual clinical demonstration, and yet this is what has occurred in Elkhart where a Methodist church was given over to the chiropractors. According to the newspaper accounts of the meeting, the chiropractic lecturer said to his audience, "We don't accept the theory of disease germs and micro-organisms. We recognize only two diseases—too much or too little functioning. When nerve centers are impinged the functioning ceases. Relieve the pressure and it functions again." Incidentally, it is reported that he said that we should stop paying taxes for the support of regular medical schools.

We are under the impression ourselves that if education does not count for anything in furnishing enlightenment or in adding to the sum total of knowledge, we ought, in justice to the taxpayers, to close all of our educational institutions and especially those educational institutions which have to do with the teaching of all of the cardinal branches of medicine as developed through several hundreds of years of intensive study and investigation. Ignorance is at a premium just now and the public might as well pay the penalty for following blindly in the steps of ignorance. Chiropractic is the deification of ignorance, and those credulous persons who take up with such an irrational and unscientific practice as that followed by the chiropractors not only deserves but will pay the penalty for such foolishness sooner or later. Perhaps it would be best to give the chiropractors full swing in order to demonstrate the absurdity of their claims, but in the meantime a lot of innocent people will suffer as a result of being beguiled by the specious arguments put out. However, it is time for a showdown on this educational proposition and if education counts for anything then make the chiropractors become educated. If education does not mean anything, then by all means it is an injustice to the taxpayers to support educational institutions of any kind.

IN this number of THE JOURNAL will be found some interesting correspondence relating to the attitude of insurance companies toward the medical profession. The insurance companies impose upon members of the medical profession because it can be done so easily and so acceptibly. When we stop to think that the business of life insurance companies is dependent almost wholly upon the skill and judgment of physicians, it seems a little remarkable that due appreciation of this fact should not result in not only decent compensation for services rendered but the display of more courtesy than ordinarily is shown members of the medical profession. Enough evidence can be produced to indicate that the average life insurance company is arrogant and exacting when dealing with doctors, and possesses neither intention nor desire to pay doctors respectable remuneration for the very valuable services rendered. The reason is summed up in the spineless attitude of the medical profession, individually and collectively, in standing up for its rights. By reading the correspondence which we are publishing in this number of THE JOURNAL it will be noted that the burden of responsibility is placed upon the physician. In other words, the insurance company expects the doctor to spend his time and energy, to say nothing of giving his expert opinion, all for the protection of the insurance company but without remuneration or any obligation, implied or otherwise, on the part of the insurance company. Proof of death may be obtained from the public records, as has been pointed out in the correspondence, and if there is any question of doubt on the part of the insurance company as to the proofs thus presented it is up to the insurance company to produce the evidence to the contrary. In reality, what the medical profession should do is to refuse to be the submissive tools of insurance companies, and to that end we suggest that the Indiana State Medical Association take some action on the subject. Expert medical evidence concerning insurance contracts primarily is for the protection of insurance companies, and there is no reason why insurance companies should not pay for such information. However, no

matter for whose benefit the expert services redound, the services should be paid for and not considered a mere courtesy.

THE time has passed for the filing of declarations of those who desire to have their names on the primary election ballots. We doubt if any medical man acting independently or as an officer of the Association has put forth any effort to determine from prospective candidates their attitude concerning medical and public health questions which may come before the next legislature for action. On the other hand, the chiropractors, together with other medical pretenders, have made it a business to secure candidates favorable to their cause, and it is a foregone conclusion that this activity will not cease until such candidates are selected at the primaries and later put into office through election. When the next legislature convenes and a lot of objectionable bills are introduced which threaten to tear down medical education and the laws on our statute books (not enforced) governing requirements for the practice of medicine, a general howl will go up by members of the medical profession as to why the statesmen (?) opposed to medical progress of every form were ever permitted to get into the legislature. It is about time for these howlers to recognize the fact that in this country everything is controlled by politics, and unless we are prepared to get into politics on the ground floor, which means putting up candidates, having them selected at the primaries and after that elected, we are not going to stem the tide of adverse legislation which is proposed and carried into effect by the medical pretenders. The whole attitude of the medical profession is one of "Let George do it". No one seems to want to take the initiative, and whoever is asked to do something feels that he is being imposed upon and promptly shirks responsibility, forgetting that someone must work for the common good. Generally speaking it is the younger men who should be most interested in furthering the aims and objects of the medical profession, and incidentally they are the ones that not only have the most time to devote to the matter but are the most energetic and resourceful. The older and the busier men in the medical profession should give advice as well as financial assistance, but all should contribute to the general cause in some way and until medical men do interest themselves in politics in this way they are not going to accomplish anything beneficial to themselves or the common good. In fact, the prospects are encouraging for the abolition of much of the medical legislation that primarily is protective for the public and only incidentally protects the regular medical profession.

DEATHS

JOHN P. BLACK, M.D., of Greenfield, died March 23, at the age of 69 years. Dr. Black graduated from the Indiana Medical College of Indianapolis in 1885.

EMMA J. FITCH, M.D., died at her home in Indianapolis, February 27, at the age of forty-four years. Dr. Fitch graduated from the Medical College of Indiana, Indianapolis, in 1901.

WILLIAM W. ZIMMERMAN, M.D., of Richmond, died March 20 at the age of sixty-six years. Dr. Zimmerman graduated from the Pulte Medical College at Cincinnati in 1888.

STEPHEN P. TRACY, M.D., of Walkerton, died March 24, at the St. Joseph Hospital in South Bend at the age of sixty-nine years. Dr. Tracy graduated from the Hahnemann Medical College of Chicago in 1886.

CHARLES W. CONGER, M.D., of Indianapolis, died March 16, at the age of fifty years. Dr. Conger graduated from the Medical College of Indiana, Indianapolis, in 1898. He was a member of the Marion County Medical Society, the Indiana State Medical Association and the American Medical Association.

MILO F. HART, M.D., of Kirklin, died March 16 at the Methodist Hospital in Indianapolis, aged forty years. Dr. Hart was a graduate of the University of Indiana School of Medicine in 1909 and was a member of the Clinton County Medical Society, the Indiana State Medical Association, and the American Medical Association.

ELMER EUGENE MORGAN, M.D., of Fort Wayne, died March 23 at the Lutheran Hospital following a brief illness. Dr. Morgan was sixty years of age. He was counselor for the Twelfth District Medical Society, treasurer of the Allen County Medical Society and was a member of the staff of the Lutheran Hospital. Dr. Morgan graduated from the Rush Medical College of Chicago in 1893 and was a member of the Allen County Medical Society, the Indiana State Medical Association and the American Medical Association.

CHARLES MARVEL, M.D., died March 5 at his home in Richmond, aged fifty-eight years. Dr. Marvel was born in Georgetown, Delaware; graduated in medicine from the Jefferson Medical College of Philadelphia in 1891, and located in Richmond in 1894. For more than twenty-five years Dr. Marvel had been on the surgical

staff of the Pennsylvania Railroad Company. He was a member of the Wayne County Medical Society, the Indiana State Medical Association, the American Medical Association, and a fellow of the American College of Surgeons.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

CONTRACTS have been let for the erection of a hospital at Clinton.

DR. NORMAN R. BYERS, of Bedford, and Miss Rhoda E. Trook, were married March 15.

THE Grant County Medical Society held its regular monthly meeting at Marion, February 28.

DR. C. F. KERCHEVAL, of Greensburg, has gone to Chicago to take a postgraduate course in surgery.

THE Elkhart Medical Society held its regular meeting at Elkhart, March 2. The meeting was well attended.

THE Wayne County Medical Society held its regular monthly meeting at the Arlington Hotel, Richmond, March 2.

THE annual meeting of the Indiana Hospital Association was held in the Claypool Hotel, Indianapolis, April 19.

THE twenty-third annual meeting of the American Proctologic Society will be held at St. Louis, May 22-23.

DR. SAMUEL G. DOWNING has moved from Tipton to Hobbs, Indiana, where he will take up the practice of medicine.

THE Vigo County Medical Society held its regular meeting at Terre Haute, March 14. Dr. George G. Davis, of Chicago, presented a paper.

DR. HERMAN N. BUNDESON has been made Commissioner of Health of Chicago to succeed Dr. John Dill Robertson, who resigned in February.

WORK has been started on the construction of a tuberculosis hospital at the Marion National Sanatorium. The hospital will cost more than $90,000.

THE LaPorte County Medical Society held a meeting March 10 at Michigan City. A paper on "Focal Infections" was presented by Dr. C. E. Nixon.

THE Huntington County Medical Society held its regular meeting at Huntington, March 7. A paper was presented by Dr. Lucien Smith, of Warren.

THE Wells County Medical Society held a meeting at Bluffton, March 7. Dr. C. L. Blue, of Tocsin, presented a paper on "The Physician of the Future".

THE Jay County Medical Society held a meeting March 9, at Portland. Dr. E. R. Hiatt, of Pennville, presented a paper on "The Laity and Medical Ethics".

DUE to illness, Dr. T. C. Louks, of Terre Haute, has discontinued his practice of medicine in Terre Haute until fall when he hopes to be able to return to his work.

THE Wells County Medical Society held its meeting at Bluffton, February 22. Papers were presented by Drs. E. E. Morgan and W. D. Calvin, both of Fort Wayne.

THE Bartholomew and Jackson County Medical Societies held a joint meeting at Columbus, March 2. Papers were presented by Drs. A. P. Roope and A. M. Kirkpatrick.

DR. FOSTER H. BOWMAN, who has recently returned from New York City, where he took a postgraduate course, has located in Terre Haute for the practice of medicine.

JOHNS HOPKINS UNIVERSITY has received an offer of a gift of three million dollars from an unnamed donor, conditioned on the raising of an additional million by the university.

THE Marion County Medical Society held its regular meeting at Indianapolis, February 28. The principal speaker was Dr. E. C. Rosenow of the Mayo Clinic, Rochester, Minn.

THE regular monthly meeting of the Lawrence County Medical Society was held at Bedford, March 1. Dr. Young, of Louisville, presented the principal address of the meeting.

THE Madison County Medical Society held its meeting at Elwood, March 21. Dr. E. M. Conrad, of Anderson, presented a paper on "Contagious Diseases; Their Cure and Prevention".

SIX million dollars has been given to Johns Hopkins University by the Rockefeller Foundation to be used as an endowment and building fund for the School of Hygiene and Public Health.

THE Daviess County Medical Society held its regular annual meeting at Washington, February 22. Papers were presented by Drs. W. H. Foreman and Walter Pennington, both of Indianapolis.

FOLLOWING the convention of the American Legion in Kansas City, virulent smallpox was reported. It is assumed that a traveler from some distant state brought in an undetected case of the disease.

DR. W. L. MISENER, of Richmond, has returned from Chicago, where he has completed a postgraduate course in surgery. Dr. Misener plans to devote his entire time to the practice of general surgery.

THE Howard County Medical Society held a meeting at Kokomo, March 3. Dr. H. H. Rhorer presented a paper the subject of which was "The Closed Method of Treatment of Infected Abdominal Wounds".

THE University of Cincinnati College of Medicine has received an endowment fund of $224,000 which insures a gift of $7,000,000 from the Rockefeller Foundation and $2,000,000 from the Carnegie Foundation.

DR. C. C. SOURWINE, of Brazil, left March 12th for the East, where he will take up the duties of a major in the regular army. Dr. William Palm, of Harmony, will take care of Dr. Sourwine's practice until his return.

THE Arkansas Medical Society will hold its annual session at Little Rock, May 17-19. This is to be the "homecoming" meeting and it is requested that all doctors formerly of Arkansas, now practicing in other states, make every effort to be present at this meeting.

AFTER twelve years of work in the field of public health work in Tennessee, Dr. Olin West has resigned as Secretary and Executive Officer of the State Board of Health of Tennessee to accept the assignment of Field Secretary of the American Medical Association.

THE anniversary of the birth of Florence Nightingale, May 12, has been set aside as National Hospital Day. National Hospital Day has been made a day on which every hospital may acquaint its local constituency with the workings and aims of the hospital.

THE Rush County Medical Society held its regular meeting March 6, at Rushville. An address was presented by Dr. Leon K. Solomon, head of the medical department of the University of Louisville, Ky., on the subject "New Developments of Treatment by X-Ray".

AT the annual convention in Binghamton, New York state grange favored the plan of Dr. Milton E. Gregg, of Mottville, who proposes that each country community now without a physician erect a home and a small hospital for the use of any physician who will settle there.

A BILL that has been presented to Congress by Representative Hayden forbids either the transportation in interstate commerce or the importation of any peyote or anhalonium or mariahuana or cannabis indica or any of its derivatives. Offenders are punishable by imprisonment or fine.

THE Red Cross Societies of Adams, Blackford, Delaware, Grant, Hancock, Henry, Jay, Madison, Miami, Randolph, Wayne and Wells counties held a meeting in Portland, March 8. Dr. Linn A. Tripp, of Greenfield, presented a paper, the subject being "The County Needs in Red Cross Work".

AT the annual meeting of the Association of American Medical Colleges held in Chicago, March 7, the following officers were elected: President, Dr. Charles P. Emerson, Indianapolis, Indiana; vice-president, Dr. Irving S. Cutter, Omaha, Nebraska; secretary-treasurer, Dr. Fred C. Zapffe, Chicago, Illinois.

DURING March the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: The Intra Products Co.—Sterile Suspension Mercury Salicylate in Cacao Butter; Sterile Suspension Mercury Salicylate in Olive Oil. Meadows Oil & Chemical Corp.—Ammonium Ichthyolate-Meadows.

IT is reported that the board of governors of the London Hospital have announced that no more women students will be accepted, due to difficulty in teaching a mixed class. Women students were first admitted to the London Hospital during the war as an experiment, and the authorities announce that the experiment has been a failure.

THE new clinic building at Fort Wayne, to be known as the Duemling Clinic, was formally opened March 26. The building is a large three-story structure and contains the offices of the following doctors: Herman A. Duemling, Howard L. Norris, Charles G. Beall, Juan Rodriguez, William O. McBride, Victor H. Hilgeman, C. C. Grandy, John T. Short, and Margaret S. Grant.

UNDER the new regulation issued by Internal Revenue Commissioner Blair of the Treasury Department, a year's supply of liquor will be available to wholesale druggists. Under the regulation the druggist may procure an amount of liquor equal to ten percent of the value of his drug business sales during the last year, instead of a supply for only a three-month period, as formerly.

THE appropriations of the children's bureau of the Department of Commerce have been increased by an amendment of the Senate from $80,000 to $120,000 for the purpose of investigating and reporting on matters pertaining to the welfare of children and child life, and particularly to investigate and report on questions of infant mortality and its causes.

THE annual meeting of the American Society for the Control of Cancer was held February 25, at its new office, 370 Seventh Avenue, New York City. The following officers were elected for 1922: President, Dr. Charles A. Powers; vice-presidents, Drs. Clement Cleveland, M. F. Engman, James Ewing and Edward Reynolds; secretary, Thomas M. Debevoise, and treasurer, Mr. Calvert Brewer.

DR. O. C. BREITENBACH of Columbus, Indiana, will sail May 3d on the Empress of Scotland from Quebec, spending three months abroad visiting the leading clinical centers of Great Britain and the Continent. He will be in attendance at the International Congress of Otology to be held in Paris in July. Dr. Breitenbach will be accompanied by his wife and sister-in-law, Miss Louella Folwy of Evanston, Illinois.

THE Hotel Committee for the St. Louis Session of the American Medical Association has announced that at all large hotels at St. Louis there are one or more large rooms with bath which will accommodate from four to six persons. When several persons are coming from the same community these groups can be consigned to one of the larger hotels if they will room together. Parties who desire to use such rooms should write direct to the chairman of the Committee on Hotels, Dr. Louis H. Behrens, 3525 Pine St., St. Louis.

THE dates for the next two examinations of the National Board of Medical Examiners have been announced as follows: Parts I and II, June 19, 20, 21, 22, and 23, 1922; Parts I and II, September 25, 26, 27, 28, and 29, 1922. Applications for the June examination should be in the Secretary's office not later than May 15, and for the September examination not later than June 1. Application blanks and circulars of information may be had by writing to the Secretary, Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

IT has been announced in a statement issued by the public health committee of the New York Academy of Medicine that the experiments of prophylactic inoculation against pneumonia carried out during the period of the war and subsequently have not thus far yielded sufficiently convincing proof of its efficacy to warrant universal application. The experiments have established the fact that the vaccines have some value against three of the fixed bacteriologic types of lobar pneumonia and the vaccinations do no harm. The duration of the immunity, however, probably is not more than five or six months.

THE Muncie Academy of Medicine held a meeting March 17 at the Hotel Roberts, Muncie. Dr. H. Kennon Dunham, of Cincinnati, Ohio, presented a paper on "A Few References to Diagnosis, Prognosis and Treatment of Pulmonary Tuberculosis". The paper was discussed by Drs. Alfred Henry, Indianapolis; E. K. Westhaver, Newcastle; and Weir Miley, of Anderson. At the March 31 meeting of the Academy a paper was presented by Dr. James Wynn, of Indianapolis, the subject of which was "Simple Means of Differentiating Types of Tachycardia; and a Reference to Vital Capacity and Its Prognostic Value in Cardiac Disease".

AT the recent annual meeting of the American Society for the Control of Cancer and the Board of Directors, the following officers for the coming year were elected: President, Dr. Charles A. Powers; vice-presidents, Dr. George E. Armstrong, Dr. Clement Cleveland, Dr. Livingston Farrand, Dr. Rudolph Matas; secretary, Thomas M. Debevoise; treasurer, Dr. Calvert Brewster; honorary vice-president, Sir Arthur Newsholme. The following were added to the Board of Directors: Dr. Charles N. Dowd, Dr. John C. A. Gerster, Mr. Calvert Brewster and Mrs. Samuel Adams Clark, all of New York City. The budget for 1922 is $60,000, an increase of $45,000 over last year's budget. Plans were discussed and laid for conducting another "Cancer Week" this year. The membership in the organization at the close of 1921 was 1,821.

THE Committee of Arrangements for the St. Louis Session of the American Medical Association with the cooperation of the St. Louis Convention, Publicity and Tourist Bureau, has made arrangements so that Fellows who so desire can use the Tourist Camp in Forest Park during their stay in St. Louis. This camp accommodates approximately one hundred fifty automobiles. It is equipped with camp stoves, toilet facilities, shower baths, running water and sinks for washing articles of any kind. The camp is located in the western part of Forest Park just off Wells Drive about a quarter of a mile east of Skinker Road. Physicians who wish to camp out during their stay in St. Louis should apply for permits, either directly to Mr. Fred W. Pape, Commissioner of Parks and Recreation, or to the Hotel Committee, Dr. Louis H. Behrens, at 3525 Pine Street, St. Louis.

THE Fort Wayne Medical Laboratory, established in 1905 by Dr. B. W. Rhamy, and one of the pioneer public laboratories in the Middle West, has been incorporated with the following officers and directors: M. F. Porter, Sr., president; A. E. Bulson, Jr., vice-president; M. F. Porter, Jr., secretary; B. W. Rhamy, treasurer and manager; H. O. Bruggeman, L. P. Drayer, D. D. Johnston and I. W. Ditton. The laboratory has greatly enlarged its equipment and the character of its business. Besides being a general diagnostic laboratory equipped for any sort of laboratory examination, it has installed a complete x-ray equipment, including one of the new and powerful twenty-inch x-ray machines for deep therapy, and a complete ultra-violet ray outfit. It also has installed and equipped a laboratory for industrial chemistry for the use of manufacturers, foundries, feed merchants, etc. The laboratory staff includes Dr. B. W. Rhamy, manager and director of the Pathological and Serological Department: Dr. Robert J. Maier, director of X-Ray and Radium Department; and Dr. Paul H. Adams, director of the Industrial and Organic Chemistry Department.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District—Councilor	Number of Counties	1921 Membership	1922 Membership to Date	Percentage
First—Dr. Willis	7	176	168	.95
Second—Dr. Schmadel	7	149	132	.89
Third—Dr. Leach	9	130	111	.85
Fourth—Dr. Osterman	10	138	132	.95
Fifth—Dr. Weinstein	5	158	149	.94
Sixth—Dr. Spilman	8	150	155	1.03
Seventh—Dr. Earp	4	425	413	.97
Eighth—Dr. Conrad	5	172	152	.89
Ninth—Dr. Moffitt	10	253	240	.95
Tenth—Dr. Shanklin	5	151	131	.86
Eleventh—Dr. Black	6	191	187	.98
Twelfth—Dr. Morgan	8	241	234	.97
Thirteenth—Dr. Berteling	8	274	246	.90
	92	2608	2450	

ELEVENTH DISTRICT

At the October (1921) meeting of the Eleventh Indiana Councilor District Medical Association, Dr. G. R. Daniels, of Marion, offered the following resolution which is to be voted upon at the coming meeting to be held May 18, 1922:

"To amend the Constitution and By-Laws of Art. 3. Sec. 2, by adding: and any member who may not attend the meetings of any year may withhold paying the dues for such year without forfeiting his membership."

Art. 3, Sec. 2, that the above resolution proposes to amend now reads as follows:

Sec. 2. (Amended October 16, 1919, to read:) The membership of this association shall consist of members in good standing of the county societies composing this district, who have paid annual dues into this association on or before the opening of the annual meeting on the third Thursday in May of any current year of its existence."

MUNCIE ACADEMY OF MEDICINE

IN MEMORIAM

DR. CHARLES MARVEL

A comrade in our ranks has fallen. A worthy member and co-worker has answered his last call.

Any eulogy, any words of appreciation of our deceased friend and fellow, are as flowers upon a casket, sensed only to the living. Nothing we may do or say will either help or hurt him now. Nor

"Can honor's voice provoke the silent dust,
Or flattery soothe the dull, cold ear of death."

The lesson of every good and noble life is a lesson and a heritage for the living. Therefore, it is altogether fitting that we pause, at this time, to appraise a life so full of devotion and service to humanity; and as an inspiration to us to again close ranks and "carry on". Dr. Marvel was a man of high type, whose personality was as pleasing as it was positive and forceful. He was a fine representative of the cultural standards and scientific training of the physician. Although a busy man he found time for those things which contribute to the moral, intellectual and social betterment. Few of our non resident members were more regular in attendance, and more generously contributed to the success of our meetings.

Therefore, RESOLVED, by the Muncie Academy of Medicine, That in the death of Dr. Marvel we have lost one of our most esteemed members, who stood for the highest and exemplified the best in the profession.

RESOLVED, That we shall hold in grateful memory the warmth of his friendship, the wisdom of his counsel and the loyal support he has given this Academy in its efforts to advance the cause of scientific medicine.

F. G. JACKSON,
W. W. WADSWORTH.
WILL C. MOORE,
Committee.

TIPPECANOE COUNTY

After luncheon on February 28th regular meeting was called to order by President Ruschli. Minutes of previous meeting read and approved without change. Under Report of Committees, the following was submitted:

"The committee as appointed by the President of the Tippecanoe County Medical Society for the consideration of certain irregularities that are at present in existence in our midst, has met and drafted the following resolutions which is presented to the Society for consideration and adoption:

WHEREAS, It is well known that contract lodge, or contract family, practice in any form is contrary

to all ideas of professional ethics; is detrimental to the profession as a whole; and as the ultimate end is conducive of but one condition, namely, inefficient professional service to the patient;

WHEREAS, Recent action of the American Medical Association disapproves of such practice and recommends that local county societies take such action necessary to control and govern such practice;

THEREFORE, BE IT RESOLVED, That the Tippecanoe County Medical Society disapproves of contract lodge or family practice.

COMMITTEE."

Dr. Pyke moved the adoption of the report as read. Seconded by Dr. Romberger. Motion to accept unanimously carried.

Dr. Keiper had the paper of the evening on "Comparative Anatomy of the Eye". Stated his attention first attracted to this subject many years ago when he was asked to examine the eyes of a valuable horse. While he refused to treat horses professionally, still his curiosity caused him to try and examine the eyes, whereupon he soon realized that as compared to the human eye there was a difference in structural anatomy. That soon he began to study the anatomy of all the eyes that his spare time permitted, many of these he sectioned and mounted and after twenty-five years of this work he was prepared to say that he had gained a knowledge through experimentation and study of his own specimens that could not have been acquired by reading the written experience of others.

He gave his processes of preparing specimens and the technique of preparing glycerine jelly for mounting purposes, descriptive of mounting cups used, and how to fill and seal them.

He illustrated his lecture by slides, mountings and books.

The central idea maintained and demonstrated throughout his talk was that the anatomy of the eye of an animal—meaning all life having power of vision—is always suited to its environment. The lantern slides as thrown upon the screen and ably interpreted by the Doctor visualized and illustrated the truth of this statement. The subject matter of the paper bore evidences of years of observations, study and work and opened up new lines of thought, as illustrated by the Doctor when he said in closing, "Will man's flying in the air through the coming years change the anatomical structure of the human eye? This can be answered only by returning one thousand years hence to find out."

Adjourned. Members present, twenty-seven. Visitors, three. WM. M. RESER, Secretary.

Regular meeting called to order March 28th by President Ruschli. In the absence of Secretary, the minutes of the previous meeting were read by Dr. Griest and approved without change.

A communication relative to a bill introduced by Senator Watson protecting those who are in the Public Health Service was read. Dr. Lairy commented upon the status of those who were in this Service merely under contract and as the intent of this proposed bill was to protect them, he moved that we endorse the bill known as Senate Bill No. 2764, and as individuals write to our Senators and Representatives asking them to support the bill. Seconded by Dr. McMahan and carried. Dr. McMahan moved that the President of this Society be empowered to write to our Senators and Representatives indicating this Society's endorsement of the bill. Seconded and carried.

Dr. Hunter announced that at a recent meeting of manufacturers of certain chemicals, as analine dyes and coal tar derivatives, it was requested that a temporary embargo should be placed against the importation of such chemicals until the home industries in these lines get started because Germany is now ready to dump her products on our market at a price way below what our manufacturers could meet. The embargo now existing will soon terminate at which time protection will cease. A bill is in congress for a new three-year embargo which will probably carry our manufacturers to the time when they can meet the foreign competition.

The paper of the evening was by Dr. Paul Risk (dentist), on "Some Aspects of Malocclusion (teeth misplacements), Its Prevention and Correction". It was a very instructive paper illustrated by lantern slides.

Discussion: DR. LAIRY—Hope to soon have laws favoring medical and dental inspection of school children so as to secure early correction of faults.

DR. CROCKETT—Spoke of the pathology of mouths and the things that can be done to improve the conditions.

Comments were made by Drs. Schreiber, Chenowith, Romberger, Hunter, Greist and Ruschli. The latter said it was a large field and very important as a phase of preventive medicine.

Adjourned. Members present, eighteen.

CORRESPONDENCE

DOCTORS IMPOSED UPON BY INSURANCE COMPANIES

Indianapolis, Indiana, March 1, 1922.

To the Editor:

I am much interested and in accord with what you say on page 68, issue of February 15, 1922, concerning imposition by insurance companies upon the profession. In line with this I have adopted a custom which I believe is of value in an attempt to correct some of the evils you have discussed.

We are continually bothered by the different types of insurance companies wanting blanks filled out. Some of the blanks contain forty to fifty questions, others less. It is noteworthy that the companies universally lack the courtesy of filling in the name, address, apparent age, sex, color, occupation, etc. That possibly is due to our past indulgences in doing the extra clerical work for the insurance companies, but it does seem to show how secure the companies are in their belief that they can get much for nothing. They, of course, can and do "pass the buck" and throw the blame on our shoulders whenever possible for their own advantage to avoid fulfilling their contract with the policyholder. As a result of this attitude they do not deserve a great deal of consideration. Again, if we fill out their blanks as they wish, and even occasionally drag out a nominal fee, we are having thrust on us a clerical job that to some at least is an unwanted bother.

My remedy for the situation as it is at present has met with universal surprise, "disappointment in me," and scorn from the companies expecting unwarranted consideration at my hands. When a blank comes to me, I call up the company's office, ask for the manager or his equivalent, and tell him to have his clerk or employed physician (poor goof) call me up and ask for the detailed information bearing directly on the condition of the policyholder in question. The clerk of the doctor can then fill in the blanks, and if necessary mail me the blank to sign, enclosing a self-addressed, stamped envelope. If the company's doctor will not do this, then the company must have a clerk who can take dictation in medical terms on the one or two questions involving technical information or opinion of the physician. If, as has been offered me as an excuse, the company has no clerk trained in taking medical dictation, then they should either get one or cut out the questions necessitating one. Such a system as proposed really argues for quicker completion of the red-tape between the contract and its fulfillment by the company, and ought to prevent blame for failure of fulfillment being passed to the physician.

The agencies here, I have an idea, think that I am acting in a very lordly, high handed way; but as a matter of fact they are getting their desired information more quickly and more sympathetically (which is decidedly to their advantage if they but knew) and are yet getting it for "courtesy". I have been impressed with the attitude of mind which expects me

to do something, or habitually grant favors, for nothing—not even good will or "thank you". On top of this, the ability to feel hurt when I offer a more business-like system would be laughable if the attitude toward me was not such a reflection on the business ability and gullibility of my profession as a whole. Some day perhaps we worms may turn, and wise companies will best take care of their own interests by making it as easy as possible for the physician to give information as he sees best for the policyholder, and also by expressing gratitude as common decency should have told them long ago. Does this meet with your approval, or am I too hard on the benevolent companies?

Sincerely yours,
T. B. NOBLE, JR., M.D.

In connection with the subject of imposition practiced upon doctors by insurance companies Dr. Noble has forwarded for publication some interesting correspondence which is as follows:

Indianapolis, March 17, 1922

Dr. Thos. B. Noble, Jr.,
1008 Hume-Mansur Bldg.,
Indianapolis, Ind.

Dear Sir:

I have been advised that the Claimant in connection with the death of E——— K——— has experienced some difficulty in having you complete your statement of death in order that they may make claim for some insurance that was carried by the deceased, and I am requesting you on behalf of the relatives of the deceased to please complete the attached form, giving the information as it is required on same, and have the form notarized, and then either mail the form to E——— K———, Claimant, or to my office for further action.

Your prompt attention is requested in this matter as the case has been delayed quite a long time pending the receipt of your statement.

Yours truly,
SABADOS, Manager.

—oOo—

Indianapolis, Indiana, March 18, 1922.

Metropolitan Life Ins. Co.,
Indianapolis, Ind.

Dear Mr. Sabados:

Let me take the time and trouble to correct some misstatements in your letter of March 17th. I have had several conferences by telephone with members of your Company on the subject of expediting the completion of your contract with the estate of E——— K———. It seems to me that you or your Company lack the desire to pay the policy as it exists and as you are compelled to by law and moral obligation. Of course it is possible for you to delay payment as long as you please, using one excuse or another, but I refuse to be made the victim of your "buck passing". Let me call your attention to a few facts.

First:—The data "required" by you are entirely unnecessary in every way as a proof of the death of the policyholder. The death certificate in the State House is held on file for your convenience in hastening the settlement of your policy. The data "required" by you are for the benefit solely of your statistical department;—knowing which, and desiring to get the necessary expert opinion for this department, gratis, you claim that without the "proper" answering of your unscientific, voluminous questions, you cannot pay the claim. Understand, you claim this by inuendo, as you appreciate that a direct statement of such would be false. However, the lie is there with the additional attempt to cover your own indifference by directing a manufactured blame onto me.

Second:—You lack all semblance of courtesy and all sense of appearing to appreciate the courtesies granted you in the past in the manner assumed by you in sending your questionnaire. You do not fill in questions numbered 1, 2, 3, 4, 5, 6, 7, and so on, which have nothing to do with any medical aspects of this policy declaration. These should have been filled out by your clerk in order to help me in identifying the policyholder, if for no other reason.

Third:—You expect me to swear to my statement, "required" by you, before a notary—whom I shall pay, I presume. Is this not impertinence on your part?

Fourth:—You say you are requesting me on behalf of the relatives of the deceased to fill out the declaration in question. "What a whopper" that is. Come clean, and substitute "our statistical department" for "the relatives of the deceased".

May I continue by asking you a question or so directly bearing on your Company's attitude toward its policyholders? Why is it, then, that the Metropolitan Life Insurance Company quibbles at the completion of its contracts, or policies, almost universally? Heretofore, we have always filled in your questionnaires without outward objection, but in spite of this our patients report that you require an excessive amount of red-tape before you pay. Do you require the same amount before you accept the payment of premiums? I fancy not.

Let me conclude this unsavory duty by outlining the future. As you are well aware, we are not legally concerned or included by any contract made by your Company. Nor are we to have a moral obligation put upon us at your requisition. As I have said, if you care to do your own work, you can get all of the information you can need by consulting the records in the State House and the family members. If you think it worth while or desirable to retain the good will of the medical profession you will make it pleasantly easy for them to GIVE you the information for your statistical department; and you will kindly, and honorably, accept blame for your own sins of negligence and indifference without attempting to let the family assimilate the impression that the fault lies with their doctor.

Finally, in regard to the claim in question:—as I have previously informed you, I will gladly give your doctor, or clerk, a dictation by phone or otherwise answering the questions which I think pertain to death in question. If you wish my signature, either bring or mail me the policy filled in completely, providing the means of return of the policy, or declaration, or what not. Do we understand each other, henceforth?

THOMAS B. NOBLE, JR., M.D.

—oOo—

Indianapolis, Indiana, March 25, 1922.

To the Editor:

In continuing the series of communications dealing with insurance companies, may I add this note describing the situation here as it exists in regard to the specific claim of E——— K———, deceased, in reference to which I already have written you?

The general manager of the Metropolitan Company here definitely refuses to honor the claim, although he himself is aware of the death of the policyholder and can obtain further proof from the official records. His attitude is that the claim must be based on proper proof of the death, which proof is only supplied by the filling out of the blank by the physician. If I do not fill out the blank, he claims, it will not affect him, as he is not required to pay the claim until I do.

Now it seems to me that the question of what constitutes proper proof of death is not to be arbitrarily settled by the insurance company, even if in the future it should define that definitely in the contracting policy. The agent here seems to worry none at all about consulting the court about this matter, as at all events he could be required to pay no more than the face value of the policy; and, by repeated trips to the courts on different policies, he could of course wear out the pocketbooks of the individuals suing, whereas the company of course has relatively a limitless source of revenue.

I consulted with an eminent lawyer here who has been working for the various companies and is in sympathy with them. His opinion in brief is that: No doctor is required to fill out any blank; the insurance company is not required to pay any claim until he does; the doctor is working for the claimant, not the company in filling out the blanks in question; the proper filling out of the questions is the great prevention of fraud and therefore is a protection for the insurance company; the information secured by the company is of great value to its statistical department; if the company does not consider proof of death absolute without proper filling in of all blanks, a suit will easily establish lawful right to collect on policy, but will be necessary by the attitude of the company. All of which walks us around a circle and leaves us where we started. Although admitting the value to the company of the information secured, Mr. Lawyer does not think that any company is legally obligated to aid the physician in supplying the data. In considering the moral gratitude earned by supplying the data, and moral duty to aid in every way the physician when he supplies data gratis, our lawyer is human and believes that all local offices should be only too willing to meet the physician half way at least.

The crux of this present dilemma is, in my mind, what constitutes absolute proof of death, and is any company to be allowed to remain passively indifferent in securing such proof and yet be entitled to the protection supplied by such proof? Is there any business so important and necessary that it can require unpaid agents, unwilling agents too, to supply its life, protect its very existence, and yet remain indifferent and act hinderingly rather than helpfully? Yet this business pays very high percentages to its agents, not only on initial premiums but upon renewal premiums, so that it is possible for an agent or salesman

to work up a sustaining revenue from renewal subscriptions or premiums and enjoy life without work because you and I keep paying.

Will you kindly suggest some way in which we can get the claimant of the policy of E——— K——— (her mother who was supported solely by the industry of the deceased and who is without income now) paid the face value of the policy? It is a disgrace to leave this poor old lady in want. Believing that I have done more than I am morally obliged to do, and much more than I am legally obliged, I hesitate to give way entirely to the whim of the local Metropolitan agent, as it would only stack up trouble in the future for me. A good, old-fashioned, perforated hickory paddle would be of great service; but these paternalistic times forbid such indulgences. So will you kindly give me a ray of light?

Sincerely yours,
T. B. NOBLE, JR.

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

ANOTHER REMONSTRANCE AGAINST MERCURY INHALATION.—During the last few years the attention of the medical profession has been directed by clever propagandists to the treatment of syphilis by procedures which involve the volatilization of mercury-containing mixtures by heat and the inhalation of the resulting volatile products. There is nothing novel in the principles concerned. Inhalations as well as fumigations of mercury have been tested at various times and the procedures have been abandoned because of the uncertain dosage. The Council on Pharmacy and Chemistry has refused to endorse preparations proposed for the treatment of syphilis which depended essentially on the administration of mercury by inhalation (Spirocide Not Admitted to N. N. R.). In this decision it is sustained by a reinvestigation of the inhalation treatment of syphilis carried out by Cole, Gericke and Sollmann. The investigators point out that the assumption that mercury is more promptly absorbed by the lungs was based on physical misconceptions. In fact, the mercury is condensed on the mucous membranes of the mouth, pharynx and respiratory tract. That in the mouth and pharynx is, for the most part, swallowed; and the absorption then takes place by the gradual conversion of the mercury into soluble compounds. In other words, the administration of mercury compounds by inhalation has no advantage over oral administration. It has the serious disadvantage of indefinite dosage.—(*Jour. A. M. A.*, March 4, 1922, p. 654).

COLLOSOLS (BRITISH COLLOIDS, LTD.).—Collosols is the trade name applied to certain alleged colloidal preparations of drugs made in the Crookes Laboratories by British Colloids, Ltd., London. The Collosols are recommended for external, internal, intramuscular and intravenous administration. A few years ago the Council on Pharmacy and Chemistry investigated the Collosol products and found that some of the specimens contained precipitates and thus they were not colloidal. Commenting on the presence of precipitates, the Council pointed out that if "injected intravenously as directed, death might result, making the physician morally, if not legally, liable". In the cases in which the therapeutic claims for Collosols were examined, the claims were found to be either exceedingly improbable or exaggerated. In the Collosol "literature" there are frequent references to enthusiastic reports by Sir Malcolm Morris, K.C.V.O., F.R.C.S.E. This medical knight seems to have devoted his energies to the exploitation of Collosols and is reported to be one of the directors of the Collosol concern.—(*Jour. A. M. A.*, March 4, 1922, p. 674).

HALE'S EPILEPTIC RELIEF.—According to advertisements in certain cheap weeklies, Hale's Epileptic Relief is "prescribed by the best New York specialists". These advertisements offer to send a $1.50 bottle free. Those who answer the advertisement receive a 4 ounce (118.4 cubic centimeter) bottle of a brown liquid and a small package of tablets, also a sample box of Hale's Liver Tablets. The American Medical Association Chemical Laboratory analyzed these preparations, and reported that the preparations give tests for ammonium, sodium, potassium and bromids, and that the bromid content is equivalent to 20.73 gm. of potassium bromid per hundred c.c. The tablets were found to contain emodin bearing (laxative) drugs—possibly aloes.—(*Jour. A. M. A.*, March 4, 1922, p. 672).

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Krause's Phosphorets (Norman Lichty Mfg. Co.), consisting essentially of ferrous carbonate, asafetida and traces of phosphorus and claimed to cure diseases resulting from a shattered nervous system. Binz Bronchi-Lyptus (Edward G. Binz), consisting essentially of a solution containing oils of eucalyptus and peppermint, glycerin, sugar, acacia, alcohol and water, and claimed to be an efficient remedy for croup, whooping cough, sore throat, etc. Dr. Goodwin's Herbal Compound (Dr. F. A. Goodwin), a mixture of plant material containing chiefly senna, fennel, uva-ursi and unidentified plant extractives, and sold for diseases of the stomach, liver, kidneys, nerves, bowels, bladder, etc. Dubois Pecific Pills (W. J. Baumgartner), consisting essentially of aloes, ferrous sulphate, calcium carbonate and sugar, claimed to be a reliable female tonic, etc. 4-11-44 Capsules and Injection (A. J. Benson), the capsules containing cubebs and copaiba, and the liquid, a solution of zinc sulphate and salt, sold for the treatment of gonorrhea, etc. Metzger's Catarrh Remedy and Speis Oil (Metzger Mfg. Co.), the first consisting essentially of iodid and mercuric compound, gentian, alcohol and water, and the second consisting essentially of gasoline, oil of eucalyptus, methyl salicylate, menthol, camphor and ether.—(*Jour. A. M. A.*, March 4, 1922, p. 672).

MORE MISBRANDED NOSTRUMS.—The following preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Blummer's Herb Tea (Lincoln Chemical Works), a mixture of althea, licorice, couchgrass, sage, senna, elder flowers, sassafras, anise, fennel, melissa, American saffron, German chamomile, dandelion, liverwort and lungwort, sold as a blood purifier, etc. Parry's Vegetable Compound (Parry Medicine Company), consisting of alcohol, olive oil, water and flavoring, and recommended for various diseases. Hall's Catarrh Medicine (F. J. Cheney & Co.), consisting essentially of potassium iodid, plant extractives, cardamon, sugar, alcohol and water. LaDerma Vagiseptic Discs (Palestine Drug Co.), consisting essentially of common salts, a small amount of alum, sugar, starch and talc. Women's Pills (Fitzpatrick Drug Co.), consisting essentially of castile soap, alkaline carbonates, and unidentified plant extractives.—(*Jour. A. M. A.*, March 11, 1922, p. 751).

OUR KNOWLEDGE OF VITAMINS.—It is generally accepted that a well-balanced diet provides the individual with such vitamins as are necessary to maintain growth and nutrition. The *British Medical Journal* in a leading editorial reiterates the statement that an abundant supply of vitamins exists in all fresh vegetables and that a considerable quantity occurs in milk and meat, provided the latter substances are obtained from animals fed on fresh foods. A normal adult living on an ordinary diet containing

a reasonable proportion of fresh vegetables is, therefore, certain of obtaining a plentiful supply of vitamins. Of all the mass of evidence which has accumulated relative to these substances, this fact is the point of greatest importance. It is, however, very unfortunately, the one point which those commercially inclined are unwilling to recognize.—(*Jour. A. M. A.*, March 11, 1922, p. 734).

PULVANE.—In a twelve-page pamphlet, sent out by the Pulvane Laboratories, Inc., Des Moines, Iowa, and purporting to deal with "The Therapy of Pulvane, an Advanced Method for the Treatment of Respiratory Diseases," we are told that Pulvane "was developed in a United States Army General Hospital by officers of the Medical Department". Pulvane is administered by inhalation, at the offices of the Pulvane Laboratories, Inc. Its "discoverer", it is declared, chanced on the method of "introducing into solution and volatilizing a certain germicide, extremely rare in its usage, because of its resistance, heretofore, to attempts to bend it to scientific will". This "rare" medicament is alpha naphthol. But since the discovery of this volatilizing method "three other ingredients of high therapeutic value have been added". It is stated that the "medical directors" will be glad to name every ingredient of Pulvane to any reputable member of the profession. Nothing is said about disclosing the amounts of the ingredients of Pulvane and hence the information offered is no more complete than that furnished for such patent medicines as Peruna. With regard to the claim that Pulvane was "developed in a United States Army General Hospital by officers of the Medical Department," Surgeon-General Ireland of the United States Army announces that the Medical Department of the Army had nothing whatever to do with the matter and that it thoroughly disapproves of the methods of the promoters of the concern.—(*Jour. A. M. A.*, March 11, 1922, p. 750).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act: Devonia Mineral Water (Devonian Mineral Springs Co.), claimed to be a natural tonic and reconstructor, and to be indicated in chronic indigestion, constipation, rheumatism, etc. Jackson's Home Rheumatism Remedy (Mark H. Jackson), composed of aloes, licorice, cornstarch and Blaud's mass, and claimed to be a treatment, remedy and cure for gout, rheumatism, lumbago, sciatica and scrofula.—(*Jour. A. M. A.*, March 18, 1922, p. 834).

WARN'S EPILEPSY TREATMENT.—The claims made for this nostrum are similar to those made for Maghee's Epilepsy Treatment, but they are worded more cautiously. While in the case of the Maghee preparation it is claimed that certain effects *will* be produced, the Warn Remedy Co. avers that these effects *should* be produced by the preparation. The A. M. A. Chemical Laboratory reports that Warn's Epilepsy Treatment consists of capsules, each containing approximately 0.06 gm. (1 grain) of phenobarbital (luminal) to which has been added some charcoal and that it differs but slightly (by absence of bismuth subnitrate) from Maghee's Epilepsy Treatment analyzed previously.—(*Jour. A. M. A.*, March 18, 1922, p. 834).

THE FUTURE INDEPENDENCE AND PROGRESS OF AMERICAN MEDICINE IN THE AGE OF CHEMISTRY.—The recent war brought about a realization of how dependent we had been on Germany for our most valuable drugs. However, before the war was over, American manufacturers were making adequate supplies of urgently needed drugs. In their work on war gases chemists had an example of what could be accomplished in an almost incredibly short time, when facilities for research were provided on a large scale and under conditions allowing of the fullest cooperation of chemists, physicists and physicians. With the close of the war, chemists began to consider to what extent such facilities might bring about American independence in drugs. A committee appointed by the American Chemical Society has now issued a report which elucidates the subject. The report makes it clear that pharmacologic research in German universities and in privately endowed institutes are far ahead of those in the United States. Our schools of medicine and hygiene, the report continues, are largely ignoring the services which pharmacology, in close cooperation with chemists and clinicians, can render to hygiene and preventive medicine. About twenty years ago, Congress established the Hygienic Laboratory of the U. S. Public Health Service; the plan of its organization was unsurpassed by that of any laboratory in the world; but since then Congress has failed to provide for any considerable growth of this laboratory. Enlarged and with adequate support, this laboratory could give the United States the leading place in the world in this great scientific and humanitarian endeavor toward the discovery of new drugs. If better government support of the Hygienic Laboratory cannot be secured, then a privately endowed research institute must be the goal of those who realize the vast benefits which will accrue from the proper type of research in drug therapy.—(*Jour. A. M. A.*, March 18, 1922, p. 806).

THE DEMAND FOR VITAMINS.—Ordinary fresh foods are the simplest, cheapest and richest sources of vitamins, yet vitamin "concentrates" are being "demanded" by the public because shrewd, forward-looking "patent medicine" exploiters are using all the subtle art of modern advertising to convince the public that it is in serious danger of vitamin starvation, and that the only hope lies in buying these alleged concentrates to make up a hypothetic deficiency. Advertising campaigns, such as these of the vitamins constitute a vicious circle; an artificial demand is created and then the manufacturer excuses his business on the ground that he is merely supplying a demand.—(*Jour. A. M. A.*, March 18, 1922, p. 810).

VERATRUM VIRIDE IN PNEUMONIA.—Medical opinion is averse to the routine use of veratrum viride in the treatment of uncomplicated pneumonia. Claims made for the use of veratrum viride are advanced for other drugs, none of which has borne critical investigation. The error on the part of those who make these claims is the result of inadequate control observations. Advocates of veratrum viride, aconite and venesection believe that by the depression of the circulation produced by the treatment, they may lessen the extravasation of blood into the air vesicles and to this degree lessen the involvement of the lungs. The lack of demonstrable success of venesection has led to the discarding of this once almost universally employed mode of treatment of pneumonia. It is unreasonable to expect as much or more from aconite or veratrum than from venesection.—(*Jour. A. M. A.*, March 18, 1922, p. 835).

ALBERT ABRAMS, A.M., M.D., L.L.D., F.R.M.S.—Dr. Abrams has published a book on "Spondylotherapy" ("Physio-Therapy of the Spine"). Spondylotherapy is stated to concern itself "*only* with the excitation of the functional centers of the spinal cord". Between 1912 and 1914 Dr. Abrams gave "clinical courses" on "Spondylotherapy" in various parts of this country. More recently Dr. Abrams had advertised that he gives a "course" in "Spondylotherapy" in San Francisco. In addition to "Spondylotherapy", Dr. Abrams has also evolved what he calls the "Electronic Reactions of Abrams" which

are said to make possible long-distance diagnosis, it being necessary only to send a few drops of blood taken from the patient and allowed to dry on a slide. Dr. Abrams founded and edits "Physico-Clinical Medicine", a quarterly "devoted to the study of the Electronic Reactions of Abrams". What seems to be the outstanding piece of apparatus, devised or invented by Dr. Abrams, of physico-clinical diagnosis and treatment is the "Oscilloclast". All one needs to do, according to Dr. Abrams, is to ascertain the "vibration rate of a drug" and then to substitute the same vibration as produced by the "Oscilloclast". More recently, Dr. Abrams has extended his observations and experiments, using what apparently is a modification of the old-fashioned pith ball suspended by a silk thread from a rubber rod. This device he calls the "Electrobioscope". If there is any scientific foundation for the marvels that Dr. Abrams so picturesquely features, the scientific world has not yet found it out.—(*Jour. A. M. A.*, March 25, 1922, p. 913).

BOOK REVIEWS

THE OPHTHALMIC NURSE. By G. Griffin Lewis, M.D., F.A.C.S. 102 illustrations. Cloth, 176 pages. W. B. Saunders Company, Philadelphia and London.

This little book answers the needs of the ophthalmic nurse and is written to serve as a practical guide for nurses who lack special training in the management of ophthalmic cases. It is written in a very plain, understandable way, and well illustrated. It gives correct ideas regarding the anatomy, physiology and hygiene of the eye, and includes a knowledge that will give sufficient proficiency to enable any intelligent nurse to meet any requirement of the ordinary ophthalmic case.

LESSONS ON TUBERCULOSIS AND CONSUMPTION, by Charles E. Atkinson, M.D. Illustrated. Cloth, 470 pages. Price, $2.50. Funk & Wagnalls Company, New York and London.

As the title indicates, this is a book for the household showing how to prevent tuberculosis, how to recognize its first symptoms and how to win back health if possible to do so. There are chapters on how the disease is spread, how recognized and how nature heals. There are also chapters pertaining to rest and exercises, the abuse of fresh air and climate, what to eat, and good sound advice concerning treatment and surgical measures. The chapters on climate are especially illuminating as indicating the character of climate to be selected for individual cases. In short the book covers in a comprehensive way the questions concerning every tuberculous patient and is written for popular reading and study.

THE BLIND; Their Condition and the Work Being Done for Them in the United States. By Harry Best, Ph.D. 765 pages. Cloth, $4.00. The Macmillan Company, New York.

This is a very interesting presentation of the condition of the blind in the United States and what is being done for their welfare. The various chapters take up the discussion of the legal treatment of the blind, their economic condition and cost to the State, as also a discussion of the subject of the prevention of blindness and the relation of blindness to heredity, disease and accidents, as also an extended discussion of the subject of education of blind children with special reference to the use of raised print and libraries for the blind. Special chapters have been devoted to the consideration of industrial establishments for the blind, including the employment of the blind in general occupations. The book concludes with chapters on organizations interested in the blind, and the provisions by the national government for caring for those who were blinded in war. To those who are interested in the problem of how best to care for the blind the book is especially interesting and instructive.

ULTRA VIOLET RAYS IN MODERN DERMATOLOGY. By Ralph Bernstein, M.D., Professor of Dermatology, Hahnemann Medical College, Philadelphia, etc. Illustrated. 162 pages. Cloth. Achey & Gorrecht, Lancaster, Pennsylvania.

In reality, this book reports the results of the clinical experiences of the author with the use of ultra violet radiations in the treatment of the various skin diseases. While the efficacy of ultra violet rays in the practice of dermatology is now thoroughly established, yet the author admits that in some cases the treatment is not as successful as one might desire, and he has no hesitation in drawing deductions therefrom. He is not over-enthusiastic, but gives credit to the ultra violet rays for some rather startling results in those cases where bacteriacidal action and antipruritic and analgesic effects, as well as its reconstructive effect upon epidermal cells, is desired. No particular attention is given to the bacteriology and pathology of dermatological diseases, and the case histories do not go into detail but summarize the experience in treatment with the ultra violet rays. While many of us may not be inclined to give as much credit to ultra violet rays, yet the recommendations borne out by the case reports open up an interesting field of study and therapeutic use of a relatively new agent.

SUBMUCOUS RESECTION OF THE NASAL SEPTUM, by William Meddaugh Dunning, M.D., Surgeon, Bronx Eye and Ear Infirmary, New York, etc. Cloth, one hundred pages. $1.50. Surgery Publishing Company, New York City.

This little book describes the commoner septal deviations and the author's method of correcting the same by submucous resection. The description is comprehensive and is well illustrated. As the author well says, the operation is one of the most important ones in the field of surgery in that it requires great care and skill in its performance, the adoption of methods to avoid serious results, but the end result when the work is performed according to the best technique gives as much satisfaction to the patient as any procedure in the field of operative surgery. Many skillful operators vary to some extent from the plan followed by the author, but no one can go astray by following the suggestions that have been given.

RADIANT ENERGY AND THE OPHTHALMIC LENS, by Frederick Booth. Cloth, 225 pages, 230 illustrations. Price $2.25. P. Blakiston's Son & Co., Philadelphia.

This little book is a study of the principles of optics and furnishes a grounding in the fundamentals of refraction. The chapters include a brief discussion of the anatomy of the eye, a discussion of the various theories concerning light, including the various rays and color, the mechanics of vision, theories and treatment of refraction of the eye, including

(Continued on Advertising page xx)

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BALTIMORE

(Continued from page 146)

accommodation and conversions, and winds up with chapters concerning the practical application of lenses for correcting vision. These latter chapters cover the use of cycloplegics, methods of testing the vision with lenses, the use of retinoscopy, ophthalmoscopy, fitting of frames and mountings, and rules for transposition of lenses.

THE NEW POCKET MEDICAL FORMULARY, by William Edward Fitch, M.D., formerly lecturer on Surgery, Fordham University, School of Medicine; attending physician to the Vanderbilt Clinic, etc. Thirtieth edition, revised. Cloth, $2.50. F. A. Davis & Co., Philadelphia, 1921.

This little pocket medical formulary has been compiled from the results obtained from medical men of wide research and ripe experience. It really represents the pet formulæ of not only the author but many medical men of wide experience. The new edition really introduces prescriptions containing the more important recently discovered drugs that have been found useful. The subject matter has been conveniently arranged, the diseases being in alphabetical order so that prescriptions pertaining to any of them may be found readily. There are other additional features like diet lists, table of differential diagnosis, hospital tables, etc., to add to the value of the book.

DISEASES OF THE SKIN, by Richard L. Sutton, M.D., Professor of Diseases of the Skin, University of Kansas School of Medicine, etc. 1132 pages, 969 illustrations with 11 colored plates. Fourth edition, revised and enlarged. Cloth, $9.50. C. V. Mosby Company, St. Louis.

Like many other fields in medicine, dermatology has made rapid advances during the last few years, and while the author's previous editions of his work on diseases of the skin were considered comprehensive and up to date, yet this last or fourth edition marks a distinct advance by adding all of the late advances. This includes revision of many chapters and the addition of considerable new material. The book also has been made more useful by the addition of a number of new illustrations. Perhaps no treatise on skin diseases devotes more attention to pathology. As in former editions of the work the stress placed upon symptomatology, diagnosis and treatment in the final analysis is what interests the general practitioner. This has been done in a clear and concise manner consistent with comprehensiveness. This latest edition should meet with the same approval that has been given former editions. It is the product of not only a teacher but an experienced clinician, and while he gives his own conclusions he does not hesitate to incorporate the conclusions of others.

OPTIMISTIC MEDICINE, by A Former Insurance Man. Cloth. 320 pages. $3.00. F. A. Davis & Company, Philadelphia.

This is a very entertaining book which may be read with profit by every general physician. In reality it is a plea for optimism as a remedial measure in the physician's contact with his patients. It is well known that a cheerful, optimistic physician often works mental miracles with his patients, and he sometimes acquires a greater reputation for skill in the use of drugs than he deserves, inasmuch as the credit belongs to the optimistic atmosphere created by the doctor. It is apparent that in every family the utmost of courage, hope and optimism should be brought to bear on the patient to direct his mental attitude in the right direction. The pessimistic doctor should change his business. The optimistic physician cannot rely upon optimism even though that counts for much in the successful handling of his cases, for he must of necessity adopt those medical and surgical measures which the nature of the case demands. In other words, his optimism must be coupled with integrity and professional attainments. He should never resort to the stock in trade of the quack. The author discusses the whole subject from the viewpoint of doctor and patient, from youth to old age, and, in connection with various conditions which call forth the physician's services. Incidents humorous and otherwise enliven the text, and much food for thought will be found in the endeavor to point out the necessity of maintaining an optimistic attitude at all times if a man or woman would preserve a sound mind and a sound body.

DISEASES OF THE SKIN, by Oliver S. Ormsby, M.D., Professor and Head of the Department of Skin and Venereal Diseases, Rush Medical College, etc. Second edition. Octavo of about 1166 pages, illustrated. Philadelphia and New York: Lea & Febiger. Cloth, $10.00 net.

This is a reconstruction of the former edition and for the distinct purpose of incorporating new material. This new material includes a description of fifteen new diseases and the rewriting of practically all of the balance of the book in order to bring it up to date. A reason for the appreciation that has been accorded this book is that the author has not tried to make it an explanation of his own opinions only, but he has reviewed the dermatological literature with a view of incorporating within the book the recognized opinions of others. These references will serve as a guide to the student who is working up any particular subject. The classification of the previous edition has been followed. The introduction deals mostly with anatomy and physiology of the skin, together with a general consideration of etiology, pathology, diagnosis, prognosis and therapeutics. This is followed by a classification of diseases, which includes hyperemias and inflammations, hemorrhages, hypertrophies, atrophies, pigment anomalies, new growths and neuroses. There are also chapters on parasitic affections, under which is discussed diseases due to both vegetable and animal parasites. The chapters on diseases of the appendages include diseases of sweat glands, sebaceous glands, nails, mucous membranes, the hair and hair follicles. The author emphasizes the importance of a good working knowledge of the microscopic anatomy and of the physiology of the skin. In the chapter on diagnosis a special reference is made to the Wassermann test for syphilis, Noguchi Luetin test for syphilis, tuberculin, Von Pirquet and other tests for tuberculosis, in addition to much other information of value in the general and special examination of the patient. In the consideration of therapy much advanced information concerning radiotherapy, which includes x-rays and radium, phototherapy, vaccine therapy and the technique for treatment with liquid air and solidified carbon dioxide is presented. The author is a well-known clinician and teacher, and the first edition of his book gained deserved popularity, so that this second edition should receive hearty welcome.

MAY 25 1922

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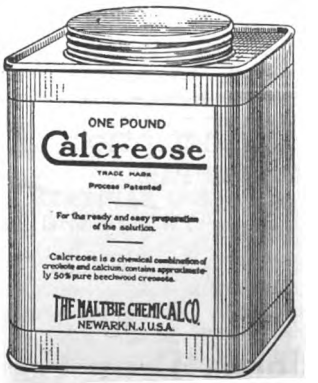
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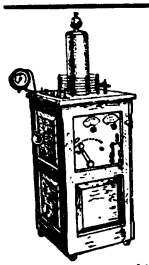
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ORIGINAL ARTICLES

STREPTOCOCCIC OSTEOMYELITIS OF THE TEMPORAL BONE

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SOUTH BEND, INDIANA

What I am about to observe I have recorded in a group of cases numbering in all 266 individuals. The disease being bilateral in 29 made it possible to explore the region in 295 instances. The diagnosis in every case was established by findings in operation and cultures taken from the diseased areas. Further supplementary corroborative autopsy findings were available in 22 cases.

In every case but one, attention was first attracted to the region by the development of an acute otitis media or an acute exacerbation of a chronic otitis media. The otites supervened in the course of the following acute infectious diseases: Measles, 87; acute naso-pharyngeal infection, 108; acute streptococcic bronchitis, 12; scarletina, 20; streptococcic pneumonia, 15; influenza, 20; epidemic parotitis, 2.

In 136 patients, 24 of whom presented bilateral involvement, we had the opportunity to check the bone findings against the preoperative middle ear findings in 160 instances. In every instance the streptococcus was recovered from the tympanic exudate before the operation and the same organism was again recovered either in pure culture or mixed with other pyogenic organisms from the infected cancellous bone through the operative wound. Supported by these findings I feel justified in making this statement:—that recovery of the streptococcus from the tympanic exudate in the presence of an acute inflammatory reaction in the middle ear is pathognomonic of acute osteomyelitis in the bone beyond the boundaries of the middle ear tract, comprehending the medullary and pneumatic spaces in the petrous and squamous portions as well as the mastoid process of the temporal bone. If this conclusion can be accepted, and it has been established in 100 percent corroborative middle ear and bone findings in this particular group, then the diagnosis will carry with it everything in the way of complications as they exhibited in the cases. Further let me say that recovery of the streptococcus from the tympanic exudate at once excludes the diagnosis of acute otitis media, *per se*, with its limitations, and also the diagnosis of acute mastoiditis for the same reason, since neither diagnosis comprehends the localities in which the disease has been found to exist. On the other hand the diagnosis of acute streptococcic osteomyelitis of the temporal bone covers the exact pathology found and signifies a regional infection without limitations, and let me add that it is an anticipating diagnosis carrying with it a guarded prognosis for it anticipates any of the complications whether regional or general which exhibited clinically in this group of cases.

The infected region in every case was reached through an operative wound and the pathology uncovered varied with the case and in bilateral operations were not identical. The variations in type will be best understood if I consider the subject in regular sequence as the different elements of the bone suffered through invasion by the streptococcus. Invasion occurred by contiguity or was hemotogenous. The immediate effect on the tissues invaded was characterized by the development of an inflammatory reaction involving primarily the vascular structures of the bone. The bone marrow in the medullary spaces and the mucosal lining of the pneumatic cells were the first tissues to suffer in the reaction and the condition was identified by characteristic vascular infiltration of the pneumatic and medullary spaces with granulations bathed in a sero-mucosanguinous exudate. The periosteum participated in the initial reaction in but a few instances, it was distinguished as primary in several of the cases in which otitis media developed as a complication in the course of a scarletina. The dura became primarily involved in two cases, evidence of such involvement being uncovered by autopsy. In this discussion I shall consider periostitis and external pachymeningitis as secondary complications rather than primary manifestations of invasion of the temporal bone by streptococci.

The causal agents in this initial process ap-

pear to have been the streptococcus, as this organism was recovered in pure culture from the infected medullary spaces in every case where the diseased region was reached before suppuration supervened and during the period in which the inflammatory reaction was limited to the vascular structures. The infective microorganism reached the region in two ways, namely, by direct extension from the adjacent infected tympanic cavity or middle ear tract, or through the infected blood stream.

These are the pathological and bacteriological findings in the cases I have diagnosed acute, uncomplicated streptococcic osteomyelitis of the temporal bone.

Sooner or later the bone itself became involved secondarily, osteitis supervening, as was evidenced by disintegration of the trabeculæ and erosion of the denser compact bone. With the development of osteitis the meninges and the periosteum became secondarily involved *per extensionem*. In the event of intracranial extension the neighboring parts in the adjacent region suffered in proportion to the extent and character of the tissues invaded and the following complications developed: External pachymeningitis, perisinusitis, thrombo-sinusitis, leptomeningitis, encephalitis, bulbo-myelitis and encephalo-myelitis. Direct intracranial extension occurred clinically in 30 individuals, involvement manifesting itself as follows: Perisinusitis, 17; thrombo-phlebitis of the sigmoid sinus, 5; thrombo-phlebitis of the superior petrosal sinus, 1; temporo-sphenoidal abscess, 5; cerebellar abscess, 1; extradural abscess in middle fossa, 4; and streptococcic leptomeningitis, 21. Streptococcus was recovered in every instance. On the other hand when extension developed extracranially the complications varied according to the locality and the tissues invaded and are recorded as periostitis, dermatitis infectiosa, myositis, thrombo-phlebitis and lymphadenitis; exhibiting clinically as parietal abscess 1, subtemporal abscess 2, cervical abscess 3, facial paralysis 4, and erysipelas 14. The labyrinth had escaped in every instance.

The foregoing comprehends the regional complications which developed through direct extension of the inflammatory process from the primary focus of infection in the temporal bone.

Through the blood stream remote organs and tissues suffered from metastases and from endotoxicosis and bacteremia, manifesting as metastatic abscesses, arthritis, optic neuritis, nephritis, pleuritis, endocarditis, myocarditis, cellulitis and general diffuse erythematous dermatitis. These complications are proof that bacterial toxins and bacteria as well as infected emboli from the primary focus gained access to the lymph and blood vessels and entered the general circulation.

The causal agents were found to be the streptococcus in mixed strains or the streptococcus mixed with other pyogenic cocci (staphylococci and pneumococci) or bacilli (pyocyaneus, influenza and diphtheroids).

What has been said sets forth the pathological and bacteriological findings in the cases of this group which I designate acute, complicated, suppurative streptococcic osteomyelitis of the temporal bone.

The clinical picture of acute, uncomplicated streptococcic osteomyelitis of the temporal bone may be said to be that of acute, suppurative otitis media and there is no variation. The symptomatology in acute, complicated streptococcic osteomyelitis of the temporal bone is variable and will coincide with whatever complication, single or multiple, which supervenes. In these cases of mixed infection, general and local symptoms appear in regular order as extension progresses. The time when we may expect to observe external localized evidence of disease like sagging of the postero-superior meatal wall or to elicit tenderness on pressure over the mastoid or antral regions is only after osteitis has supervened and the periosteum has become secondarily involved; likewise symptoms indicative of meningeal irritation appear when the inner plate suffers erosion with coincident dural involvement.

The classical symptomatology of acute, suppurative mastoiditis is no guide in the diagnosis of this atypical phenomenon; there need be no sagging, no tenderness on pressure, no elevation of temperature, no change in the structures over the mastoid, leucocytosis is a variable incident, and yet whenever the streptococcus has been demonstrated in the course of an acute, suppurative otitis media even if subsequently other organisms have submerged that bacterium and even if complete resolution as far as the middle ear is concerned has been established, nevertheless a focal infection still exists beyond this area in the bone marrow or in the mucosal lining of the pneumatic cells in the temporal bone.

The findings in roentgenograms were variable, they were reliable and corroborative only in the cases of the suppurative type of the disease but were not so valuable in a diagnostic way if the plates were taken before the period characterized by suppuration and coincident bone destruction.

Mortality:—In 24 the termination was fatal and in 22 autopsy was done. The causes of death were found to be: Pneumonia, 2; metastatic septicopyemia, 1; streptococcic leptomeningitis, 21; the latter complicated with cerebral abscess, 5; with cerebellar abscess, 1; with sigmoid sinus thrombosis, 5; with superior petrosal sinus thrombosis, 1.

Great importance attaches to the method by

which specimens are recovered from the middle ear and I wish to say that the customary practice of recovering the specimen on a sterile cotton tipped swab which has been dipped into the external auditory canal when it is filled or partially filled with blood, serous exudate or pus proved to be faulty technic; many of the swabs innoculated in this manner were reported contaminated or negative and had to be discarded. The best results in my experience have followed when the canal is first cleared of any blood or exudate and followed by thorough cleansing with saline solution and alcohol, after which it is dried with sterile cotton, such preparation reduces to the minimum the chances for contamination; after this preparation we use a sterile Siegel otoscope to induce a negative pressure in the canal and in this manner aspirate through the opening in the tympanic membrane a bead-like droplet which does not overrun and pass onto the floor of the canal. The otoscope is removed and through a sterile speculum it is an easy matter to recover the droplet on a very fine sterile cotton tipped applicator. In cases of secondary mixed infection it is not uncommon to have the specimen reported as negative for streptococcus, and the reason is that the secondary infecting organism like staphylococcus albus will oftentimes submerge the primary infecting streptococcus and the latter organism will remain hidden until the secondary infection has cleared in the middle ear tract, after which it may be recovered. I have seen several competent otologists misled and follow cases of this character through to what they interpreted as a complete recovery from an uncomplicated, acute, suppurative otitis media and discharge them as cured, only to have a recurrence of the disease manifest itself in a variable period after apparent recovery. Nine cases of this character are included in this group.

The records show that in our military service 40 percent of the cases developed in the course of, or were noted to have developed at a period subsequent to an acute, streptococcic naso-pharyngeal infection. This percentage obtained in the face of two epidemics of measles, an epidemic of scarletina and the influenza epidemic and covers the period from November, 1917, to March, 1919. In civil practice this percentage is still greater, we will find it to be 61 percent in the cases recorded from March, 1919, to date. Confronted by this remarkable showing of the status of acute streptococcic naso-pharyngeal infection in relation to a disease which I have chosen to interpret as acute streptococcic osteomyelitis I feel justified in making this observation. An acute otitis media supervening as a complication in the course of an acute streptococcic naso-pharyngeal infection imposes on the otologist the responsibility to positively exclude the streptococcus as the possible causative agent of the ear complication, wherefore it is good practice to determine by culture the absence or presence of the streptococcus organism in every case presenting acute naso-pharyngeal infection, since this the streptococcus organism is the differentiating factor between acute otitis media and acute streptococcic osteomyelitis of the temporal bone.

CONCLUSIONS

1. Streptococcic osteomyelitis of the temporal bone is a clinical entity and is to be diagnosticated as such.
2. The etiological factor is the streptococcus organism, it may be of any type.
3. Recovery of the streptococcus organism from the tympanic exudate in a supposed case of acute otitis media is sufficient evidence to support the diagnosis.

DISCUSSION

DR. O. C. BREITENBACH (Columbus): Just a few words with reference to regional bacteriology. We are accustomed to associate with any inflammatory reaction of the middle ear the streptococcus of several types—the pneumococcus, the staphylococcus albus and aureus, diphtheroids, Pfeiffer's bacillus, and also, but in minor role, the bacillus proteus and the bacillus pyocyaneus. Some controversy exists at the present regarding the identity of the streptococcus mucosus capsulatus, some authors accepting it as identical with type three, pneumococcus. This discussion does not minimize the importance of this organism as an otologic offender. Suepfle some few years ago made a very careful analysis of several hundred cases of mastoiditis with especial reference to the bacteriological findings and took a firm stand in his assertion that staphylococcus infection was never a factor in the development of intracranial complications. Kerrison referring to the findings of this very able investigator asserts that this view is extreme and therefore incorrect, but that it serves to emphasize the infrequency of intracranial disease secondary to staphylococcus infection. He cites as a corollary that the streptococcus on the other hand is unquestionably responsible for a majority of cases of intracranial disease of otitic origin. The same author concludes by saying that even though we were to accept the conclusions of Suepfle as in the main correct, one must yet acknowledge that one cannot prognosticate from the micro-organism found in the tympanic discharge, the future course and severity of aural disease. This being determined quite as much by the patient's systemic condition.

And as a matter of fact we meet clinically with cases presenting an exceedingly severe type of inflammation and with extensive complicating pathology in which the staphylococcus is

the attacking organism and also with a very mild type of acute otitis media resulting from a streptococcic invasion of the middle ear. We must in every individual case not alone reckon with the virulence of the invading organism but also with the factors that determine vital resistance in the patient. I would hesitate to make the diagnosis of an acute uncomplicated osteomyelitis of the temporal bone on the finding of streptococci in the case of an acute otitis media, and I would think it presumptive to make the diagnosis of an acute complicated osteomyelitis of the temporal bone because of the evidence of a streptococcus infection demonstrated by smear in the case of an acute suppurative otitis media.

I accept as very radical the deductions of the essayist as it pertains to the findings of the streptococcus in smears from the middle ear. It is not necessary to try to explain away the virulence of streptococcic infection in middle ear infections in camps at the time of our last pandemic of influenza. Time will not permit the citation of factors that undermined the vital resistance of troops as a result of which a very high virulence was attained by invading organisms. Streptococcic pneumonia, therefore, was associated with an incidence of empyema that was startling. With an avidity for pericardial infection by this same organism, aspiration of the pericardium resolved itself into a routine proposition in many cases. And as we find more destructive pathology in other fields of medicine and surgery because of increased virulence of the infecting organism and lowered vital resistance in the individual, so in our otologic cases we suddenly were beset with a most acute symptomatology, sometimes baffling in the light of the secondary pathology *per extensionem* so graphically brought to our attention by the essayist.

I am inclined to look upon infectious osteomyelitis, and I believe authorities will bear me out, as an acute inflammation of bone due to the infection of bone marrow by pus organisms. The basic pathology is much like that seen in the furuncle and has been referred to as "bone furunculosis", although the process in the bone naturally undergoes modification because of the histology of bone determining a slightly different course from that of soft tissue. In the vast majority of cases the organism is the staphylococcus pyogenes aureus. In a few cases it is the streptococcus. The consensus of opinion favors the viewpoint that the streptococcus has a predilection for superficial infection of bone, producing therefore not a diffuse osteomyelitis but rather a primary periostitis.

Pathology of mastoiditis, as we have recognized it in the patient, centers itself in defective drainage following infection of the middle ear. There ensues the picture of an acute exudate associated with a leucocyte infiltration, the vessels become congested, the mucosal epiderm shows evidence of disintegration. The periosteum covering the bone depending upon it for nutrition becomes carious or the arteries in the mucosa become thrombosed and the blood supply is thus cut off from the membrane and periosteum as well as from the bone. Caries of the tegmen tympani and antri may readily carry infection *per extensionem* into contiguous structures. The question therefore presents itself, in what respect do the findings in acute osteomyelitis of the temporal bone differ from the picture of thrombophlebitis and the resultant osseous necrosis that we have all met clinically in the more destructive types of mastoiditis?

DR. ALBERT E. BULSON, JR. (Fort Wayne): The author of the paper is to be commended for the very careful way in which he has investigated his subject. However, I feel very much like Dr. Breitenbach does concerning the acceptance of all of the conclusions offered. We know that the extension of the infection depends not only upon the resisting power of the tissues but also as to whether the blood stream has been contaminated. So far as involvement of the temple bone is concerned, we all know that the anatomic peculiarities have a great deal to do with the possibility of extension of infection from the middle ear, and this is wholly aside from the nature of the infection. Sometimes the infection passes directly from the middle ear cavity to the antrum, but in other cases it meets with resistance through an obstruction in the *aditus ad antrum*. It is in this latter class of cases that it is quite possible for the infection to reach the temporal bone by means of the blood stream, but of course it can reach other parts equally as well. I am not prepared to accept the statement that in the presence of a streptococcus infection in the middle ear cavity there is always a blood stream infection, or that there is always involvement of the mastoid antrum and contiguous structures. Statistics show and I am sure that many of us have had cases in which the infection was of the streptococcus variety and yet those cases have gone on to recovery without operation. I confess that I always look upon a streptococcus infection as being a dangerous proposition, knowing that complications are more prone to occur than in any other infection. However, by carefully watching the progress of the case, including local manifestations, temperature, and blood count, we often may avoid operative interference. This does not argue that in a large percentage of cases there may be a blood stream infection. It merely argues that we are justified in being careful in resorting to heroic treatment. Of paramount importance is early and a wide incision of the drum membrane, absolute rest of

the patient, and watchful but intelligent waiting on the part of the surgeon with the intention of instituting operative procedures at the first positive indication of extension of the trouble.

DR. W. S. TOMLIN (Indianapolis): The Doctor has arrived at conclusions which I am inclined to think are very dependable as applied to the kind of cases which he has treated. However, I do not believe that it is quite proper for us to undertake to apply these conclusions in private practice. They do call our attention to a very important class of cases which may occur in private practice, and they should put us constantly upon our guard in cases of streptococcus infections.

I have observed the small and very restricted class of this acute streptococcus infection occurring in a family, in a school, or in an institution, and when you find a case of infection of the middle ear which follows the course to operation, and another case develops in the same household or school, you may reasonably expect it will follow about the same course. It comes back to the same point that has been developed —that the streptococcus is a species, and within that species we have types, and when you have a virulence in one case that has been contracted from another, the virulence may be quite similar.

This paper should keep us on our guard not to say that every case that shows an acute streptococcus infection should be operated without waiting. I think we should place ourselves in the position of the patient. If you had an acute streptococcus infection would you be willing to be operated within forty-eight or seventy-two hours, or within a few days' time, when there was nothing of a severe feature showing up? I think that is a point to be borne in mind.

DR. C. NORMAN HOWARD (Warsaw): I would like to emphasize the point of streptococcus infection entering the blood stream.

There comes to my mind the case of a patient who had a suppurative otitis media, left, with extension into the mastoid. The laboratory findings showed it to be a streptococcus hemolyticus infection. We operated and found pus around the antrum, in the tip of the mastoid and in the region of the lateral sinus. The sinus was uncovered. No thrombus was found.

During that week the right knee became painful and swollen and was aspirated. The hemolyticus streptococcus was found again in the knee. The right shoulder became slightly painful and swollen, but was not aspirated. The patient recovered without involvement of further structures by this streptococcic infection.

DR. HARRY BOYD-SNEE (closing): To cover one phase of the discussion let me point out that the middle ear tract is laid down early in fetal life, in the sixth month it can be identified as an anatomical entity and at birth the bony bounding walls are complete and are formed by fusion and folding of the pars squama and pars petrosa. The tract comprises the eustachian canal, the tympanic cavity and the antrum. The middle ear tract has a mucous membrane lining that is uninterrupted and continuous from the nasopharyngeal opening of the eustachian tube to the posterior wall of the antrum, and this lining membrane functions as a periosteum to the bony walls, and it derives its blood supply from branches given off the neighboring arteries. Intracranially the dura is applied to the inner plates of the squama and the petrosa and likewise functions as a periosteum to those structures. The vessels from the dura as well as those from the lining mucous membrane permeate the intervening cancellous bony structures and anastomose freely in the situation of the pneumatic and medullary spaces. In the medullary spaces we find the red marrow.

In every case in this large group, excepting one, the initial clinical manifestation of infection in the region was evidenced by the development of an acute inflammatory reaction in the lining mucous membrane of the middle ear tract and was recorded as an acute otitis media, the causal agents recovered by culture from the tympanic exudate was found to be the streptococcus. The gross pathology uncovered through operative wounds was characteristic vascular infiltration of the pneumatic and medullary spaces, with granulations and exudate; histo-pathological findings in the material removed were reported as showing round cell and leucocyte infiltration, thrombosis in the venules could be identified in specimens recovered in early operation before fibrosis and osteitis appeared as factors; cultures from the different areas explored invariably showed streptococci. On the foregoing anatomico-pathological and the bacteriological observations the specific diagnosis rests.

It has been impossible to estimate exactly the proportion of the cases in this group which should be classed as hematogenous infections that are to be distinguished from those cases in which the complication developed by contiguity in the course of an acute streptococcic nasopharyngeal infection. I can safely state that the greater number developed by direct extension from the nasopharynx. Clinical experience and autopsy findings will support this assertion.

In all the material utilized in this work the streptococcus organism has been identified as a Gram positive diplococcus recovered from cultures from which the pneumococcus has been excluded by test. It has typed variously as streptococcus mucosus capsulatus, streptococcus viridans, streptococcus pyogenes, streptococcus hemolyticus and streptococcus nonhemolyticus.

SOME PROBLEMS IN SYPHILIS*

R. V. HOFFMAN, M.D.
SOUTH BEND

The economic and social importance of syphilis is indisputable. It seems fair to state that the great majority of physicians appreciate their responsibility and obligation in this paramount issue of public health. But, as in most committees whose members are many, few participants take unto themselves the obligation of doing all of which they may be capable. One might state that every physician shares three great responsibilities: firstly, that to his fellow man; secondly, his duty to the advancement of medical science; and thirdly, his obligation to the insuring of his own success. The great prevalence of syphilis emphasizes the importance of the first and foremost obligation, that to his fellow men. Some time ago in attempting to determine the prevalence of syphilis in the United States, I consulted eighteen treatises written by nationally recognized authorities. Five placed the incidence of syphilis at 6 percent; three at 8 percent; three at 10 percent; two at 10 to 12 percent; and three upwards of 13 percent. The clinician whose estimate was 6 percent obtained his figures from a hospital clientele derived from the so-called "middle classes". The estimates above 13 percent were made in the poorer section hospitals, a considerable proportion of whose patronage was derived from the colored race whose rate incidence is probably double that of the white people. By taking into consideration the obtaining rates of incidence appropriate to each race and sex, and applying the rates in their relative ratios as indicated in the 1920 U. S. census, I have estimated that some 8,700,000 men, women and children of the United States have syphilis in some form. That is equivalent to approximately 8 percent of our entire population. Obviously these figures will not apply accurately to any single group of people, as the ratio refers only to the general average of many groups. However, I feel that one may conservatively consider that one person out of every twelve bears some form of syphilitic infection.

Our second great duty is the advancement of medical science in a manner that best conserves the health of the nation. To a considerable extent that may be done by lending our every effort to educate the public to the importance of demanding accurate diagnosis and adequate treatment. This may be accomplished by the profession's assistance for informing the public by means of press and other media of dissemination. Of equal and possibly more importance is our duty to prepare to render to the public the type of treatment which we advocate. If in our private practices we diagnose no more than one case of syphilis in every fifty patients examined, is it not probable that many luetic infections are being missed? The universal employment of routine Wassermann tests is neither practical nor necessary. The so-called "busy practitioner" can require every patient to strip to the waist, and routinely examine the eyes for the pupillary reflex and iritic adhesions; (2) the skin for lesions of undetermined etiology; (3) cervical and epitrochlear glands for enlargement; (4) the aortic valve and arch for murmurs; and (5) knee jerks. (The genitalia should be included if the history of genital lesions is obtained.) Such a routine may be satisfactorily carried out in two minutes. If the aforementioned regions appear normal, seldom will syphilitic infections be overlooked.

The Wassermann reaction is insufficient evidence for the determination of syphilis, in the absence of supporting clinical signs. Nevertheless it is advisable to treat many patients, where blood sera is "weakly positive", for the purpose of determining the etiology of the case—as indicated by the serologic response to antiluetic therapy. The Sachs—Georgi, Hecht—Gradwohl and other substitute tests are inferior to the Wassermann test. The principal claim made for the substitute tests is their faculty of detecting "weakly positive" serum reactions. The pseudo-positive reactions are frequently not apparently caused by syphilis, and they serve to obscure the diagnosis of the actual cause. The cholesterinized antigen is of value in determining the point beyond which intensive treatment may be discontinued. The luetin test is so unreliable that it should be discarded.

The third obligation, that of investing our efforts in tasks whose results are commensurate with our labor, may be discharged to an unusual degree of satisfaction in the treatment of syphilis. Despite the fact that no anti-luetic drugs of great value have been discovered since the advent of the arsphenamines, our efficiency in employing those drugs has been much increased. But we yet have much to learn concerning the efficient use of the drugs now available. Our therapeutic goal lies in the determination of the ratio of the maximum tolerated dose to the curative dose. The present standard dose—0.9 decigrams of neoarsphenamine per 150 pounds body weight, administered at weekly intervals—will probably give way to smaller doses administered at frequent intervals. The preliminary experiments which my colleague, Dr. Marcus Lyon, and I are carrying out on syphilitic rabbits point in that direction. It is probable that the larger doses may be preferable for the chronic infections where the spirochetes are

(*) Read before the Section on Medicine of the Indiana State Medical Association at the Indianapolis session, September, 1921.

harbored deep in the lymph glands. It is difficult to understand the reasons why mercury is usually administered according to a pre-arranged schedule of dates and doses. Mercury not infrequently damages the kidneys, and if thus given despite the contra-indications it is liable to frustrate the further administration of the arsphenamines. The dosage and time for administration of mercury should be determined from time to time by the results of urinalyses and the condition of the patient. Iodides should be given in larger doses. The doses usually employed are far too small. It is seldom necessary to start on less than 60 to 75 grains daily, rapidly increasing the dose until symptoms of iodism occur. The arsenicals, other than the arsphenamines, have been disappointing.

The majority of syphilitic infections are susceptible to sterilization. The term "sterilization" is employed here in the sense of disappearance of manifest lesions, and the enablement of the "cured" individuals to beget non-syphilitic offspring. No evidence thus far adduced has shown conclusively that the so-called "cured" syphilitic patients still harbor spirochetes and may transmit the disease by sexual contact.

It is appropriate to call to the attention of the Indiana State Medical Association the remarkable work of the U. S. Interdepartmental Social Hygiene Board. That governmental organization has made appropriations to a large number of the country's prominent medical institutions for the purpose of developing better methods for the treatment of syphilis. As a result the following scientists — Engman, Hirschfelder, Reid, Hunt, Loevenhart, Ordway, Warthin, Winternitz, Hugh Young and many others—are working intently on problems of syphilis. Dr. Reid Hunt of Harvard, who worked with Ehrlich during the latter's search for an effective spirocheticide, has during the past year materially improved the methods for the manufacture of arsphenamine. It can now be manufactured considerably cheaper and purer than has hitherto obtained. Many other advances in the problems of syphilis have been made by these investigators who are cooperating with the Interdepartmental Board. Their results will be published for the benefit of the medical profession as soon as the discoverers have made adequate clinical application of their findings.

There is one problem in syphilis which I paroach with extreme hesitancy and indecision. I refer to the wisdom and necessity of attacking syphilis as a public health responsibility. It is apparent that the venereal clinics established jointly by the federal and state health organizations during the war, and since maintained in many communities, have made material inroads against the heavily infected populace. But what should be their future status? Should they be perpetuated? I know of no justifiable reasons why they should continue to exist as venereal clinics, *per se*. I do believe, however, that venereal clinics should be perpetuated as subdivisions of general hospital dispensaries. If there are no general dispensaries available to the community, then the establishment of a venereal clinic is perhaps justifiable, provided that it takes care only of the infected poor. In other words there are no particular reasons why syphilis should be handled differently from the various other diseases which affect a community.

Public health officials of several states (I have never discussed the subject with the Indiana officials, and do not know their attitude) have told me that federal and state participation is necessary "because the great majority of physicians treat syphilis inadequately, thereby jeopardizing the public health". If that be true, then it would seem befitting that the health officials conduct a campaign for the education of the physicians, directly by informational methods, and indirectly by influencing the necessary regulations in medical licensure. If our public health officials deem it necessary to handle the syphilis problem directly with the people, instead of through the physicians, it is apparent that such action must constitute a step forward in the direction of so-called "state medicine". The solution is up to us as private practitioners of medicine. If we continue in our present rut, state officials will be compelled to handle the menace to its public health directly through the people. If we believe that the responsibility is ours as private physicians, then we must prepare ourselves to treat the disease at least as adequately as it is now being done by the federal and state health officials.

DISCUSSION

DR. WILLIAM S. EHRICH (Evansville): There are a few things in Dr. Hoffman's paper which I would like to bring out a little more strongly, and a few things I wish to disagree with. His percentage of syphilis as applied to the North I think is rather correct, but as applied to the South with its immense negro population it is far too low. I was raised in South Carolina in the rice district where there were many negroes and I think it would be ultra-conservative to say that not less than 30 percent either have acquired or hereditary syphilis.

I think the most important problem in handling this disease is the early diagnosis, and there I can work in a few remarks about the clinic. I think the reason for the existence of these clinics is the very poor treatment that the ordinary physician gives to syphilitics. The important part in the treatment of syphilis, even more than in tuberculosis, is the early diagnosis. We all know that syphilis in the early stages is comparatively simple and is curable, but let it

go on until all the organs of the body become impregnated with the germ and it is a question whether it is ever cured. Now we have a great many physicians in our city, all of whom treat syphilis, but there are only four dark-field illuminators for the detection of early syphilis.

So far as the other laboratory methods go, I am a follower of the Wassermann reaction. I heartily agree with the doctor that the original Wassermann reaction is the most reliable. It is unquestionably an aid to our diagnosis and treatment of syphilis. A one, two or three plus Wassermann reaction means very little to me. A patient either has or has not syphilis. These little variations in reading are a matter of personal equation with the laboratory man, I think. If I am treating a person for syphilis and he is doing very nicely and his Wassermann reaction is negative, I think there is a chance that he has cleared up. If there is an accumulation of negatives over a long time I consider the patient cured. If the Wassermann reaction is positive I think the patient is not cleaned up and my treatment will vary as to whether the test is negative or positive.

So far as the treatment of syphilis goes, there was a time when we thought, and I believe correctly, that mercury cured syphilis. You take any case record today and you find that so many salvarsan injections are given and then so many mercurial injections and then a rest follows. I think that is a mistake. Even taking for granted that mercury will not cure syphilis, I believe that its administration will at least make the body an unfavorable culture medium for the spirocheta pallida; also the mercury will reach the organisms in lymph nourished tissues that the salvarsan will not, since the salvarsan is excreted within a short time of its administration and its effects are only noticed in the blood supplied tissues.

DR. GEORGE W. MCCASKEY (Fort Wayne): We are well aware that the Wassermann test is not specific for syphilis, but when patients have not resided in the tropics, it can usually be so regarded with certain slight reservations. I agree with the writer that too much importance cannot be attached to the exact percentage of inhibition, or as it is usually expressed, the one, two, three or four plus. The important fact is that there is something in the blood which, in combination with an antigen, combines with, "binds" the complement, to a greater or less degree, and thus impairs or destroys the hemolytic system. The same patient may show less at one time, and more at another, without any obvious change in his clinical condition. It is notorious that different serologists will get somewhat different results with the same specimen of serum. While a serologist is likely to make a negative report on the basis of a one plus Wassermann, the fact is that it may mean syphilis, and is a question for the clinician, rather than serologist, to decide. I have been watching these reactions in my own clinical laboratory for years and have many times seen a one plus Wassermann become a three or a four plus. It is well recognized that a syphilitic patient with a three or four plus Wassermann may, or perhaps usually presents a weakening Wassermann, but when it reaches a two or one plus, it should be, and I think generally is, regarded as evidence of a residual syphilitic infection, which indicates that the patient should not be finally dismissed, but should remain under at least intermittent observation over a long period of time, and should possibly have additional treatment. This is, of course, almost equally true when a negative instead of a weakly positive reaction has been achieved.

DR. A. W. BRAYTON (Indianapolis): It is largely dependent upon the impression you can make upon the patient as to the necessity of the persistent use of the old remedies, particularly mercury and potassium iodid where it is indicated. We should not discourage our patients by putting them in a position of believing they are incurable. We should brace them up and tell them the results of continued and perfect treatment. We should always be on the lookout for syphilis. It is deceptive and easily mistaken for other disorders and conditions. The prevention of it for those who are constantly handling it is the use of calomel and grease, one-third calomel and two-thirds grease, before and after, if there has been any opportunity for specific infection, because the spirocheta cannot get by those substances. If they were thoroughly used, according to the instructions given by the United States Army to the soldiers it would be a great benefit to the community at large and to those who are treating syphilis. We should insist upon these patients taking at least four courses of treatment a year. If we keep them encouraged and in good spirits, it will help a good deal, but we should keep after them. If they do not come to the office when they should, send for them, always impressing upon the doctors and the patients themselves the necessity of the long continued and harmless treatment. I think the majority of these patients by taking one-fourth grain of protiodid of mercury four times a day will have no bad effects. They may have a little looseness of the bowels for a few days and so on, but nothing serious. The new remedies have been of great help and assistance and we are persisting in their use, but the old ones are not to be neglected.

DR. W. A. FANKBONER (Marion): I would like to know whether there are ever situations where a repeated plus one Wassermann reaction

can be neglected, the patient showing a clinical cure through a long period of time, perhaps nine months or a year.

DR. ROBERT V. HOFFMAN (South Bend—closing): There are only one or two points about which questions were asked and I will answer those.

Concerning the North and South, I agree that that is the exact situation, but my figures apply to the population of the United States as a whole. It is a problem that the statisticians of the United States Public Health Service at Washington have been studying for a long time. They hesitate to give any figures, their general attitude being that probably 8 or 9 percent are infected. They cannot determine definitely. In the Washington University at St. Louis it runs almost 50 percent for the colored man and in our private practice it may be 3 percent, so they average it up as well as possible. The enlisted soldiers in 1907 ran about 15 percent, in the world war about 9 percent, and the average amount in Officers' Training Camps was about 3 percent, which balances the figures pretty well. [The figures of Love and Davenport (?) after enlistment were not over 3 percent.] The deplorable thing is that when people find some figures are not true, they are pretty apt to ignore all figures.

One negative Wassermann test, Dr. McCaskey, means little or nothing, as we all know. Later on that test may be found positive. The work of Ordway shows that in the work positive complement fixations the cholestrol esters are diminished and that does not necessarily mean syphilis. It means fat, and if the patient drinks lots of alcohol we may get a negative instead of a positive for new chemical substances are produced by the action of the alcohol on the fatty tissues.

I am sorry the question of the arsenicals was not taken up more thoroughly. I expected that to be discussed by the people who have used silver salvarsan and various other preparations. I recall that among the first articles published were those obtained from certain New York laboratories, containing a very glowing report on silver salvarsan. I had an opportunity of looking into the records to determine the basis from which he obtained his figures but they were not available—the conclusions were more or less of a "general impression". When such a good observer as Hazen reports that, while using silver salvarsan, mucous patches have appeared in the mouth, it makes one a bit skeptical. Experiments have shown that none of the substances so far produced have had quite the value of arsphenamin and neoarsphenamin. There is a general impression that arsphenamin is a little better than neoarsphenamin, but this has never been quite proved by anyone, despite the very intensive work of Kolmer. The fact is that anyone can use neoarsphenamin. If you get the arsphenamin solution into the tissues instead of into the vein, the patient will probably never return for further treatment, but if you get the neoarsphenamin into the arm by mistake the patient will not have such a serious lesion.

As to the question of rendering negative a persistent series of positive reactions, that is a problem. If you wish to give fifty or sixty injections of arsphenamin it may be reversed. Many of these are cases wherein the infection has not been wiped out, and the spirochetes still remain in the lymph glands.

It seems best to use the ice box method where the reaction will prevail much longer. It is hard to render certain cases negative. The important thing is that experience has shown that thousands and thousands of these patients after having been treated are married and have Wassermann negative children. These people live for a long time, feel well and have healthy children, and it seems to be the practical view to take, rather than be concerned with the few spirochetes lying dormant in the lymph glands.

WHAT THE GENERAL PRACTITIONER CAN DO IN OTOLOGY*

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This paper is not written as a reprimand, but with a central idea, sincere hope and desire that an intense interest may be stimulated in otology, rhinology and laryngology by the profession at large. Not that every practitioner will, of necessity, need to become a specialist, learn a slipshod technique of operation, and thereby attempt some difficult procedure which will obviously fail of its purpose, but that every man practicing medicine will become acquainted with the simple instruments and normal anatomy of the ear, nose and throat, so that he will be able to recognize pathology early, at which time it is always simple.

To demonstrate our purpose, we will consider acute otitis media. It is an acute inflammation of the middle ear, a study of which must be made from its anatomical pathology and the allied structures, nose and throat, in order that subsequent complications may be expected and appreciated.

The complications are (1) acute suppurative and non-suppurative osteitis of the mastoid, (2) infective sinus thrombosis, (3) epidural abscess, (4) cerebral abscess, (5) cerebellar abscess, (6) diffuse suppurative labyrinthitis, (7) circumscribed suppurative labyrinthitis, (8) purulent

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leptomeningitis, (9) meningitis, (10) chronic suppurative otitis media, (11) loss of hearing, (12) otosclerosis and tinnitus. The least of the twelve is a grave complication, and nine of them, when they are not recognized early and properly cared for, are in a vast majority of cases fatal. This battle line of the enemy should stand out, clear as a cameo, in the mind of any doctor when he stands on the other side of an acutely inflamed middle ear,

It has been well put by Newhart, when he says, "No branch of medical science is more neglected or none offers more promising results than study of ear diseases. Too long has the attitude of the average practitioner toward disease of the ear been one of passive indifference, confessed helplessness, or boasted ignorance." The charge for this blame should properly be laid to schools that made the doctor. Many of the schools, despite high classification, continue mediocre service to their students. The general practitioner's lack of enthusiasm in otology is due to this failure of the schools to provide sufficient and proper instructions in diseases of the ear, nose, throat and mouth. The head mirror and otoscope, and how to use them, are as essential as the stethoscope, and should be a part of every practitioner's armamentarium. Especially is this true in our particular climate.

Babies are absolutely unable to localize pain, and children up to ten years of age, unreliable. If it were possible that children could be relied upon to express themselves accurately as to pain, the affection of the ear should be discovered before pain has made its appearance. It requires but a limited amount of practice to be able to see and acquaint one's self with an ear drum and its half dozen landmarks. Any doctor could well afford, and he would derive satisfaction and pleasure to himself, besides being of inestimable value to his patients, if he would take three or four weeks' training in diagnosis in one of our numerous clinics. The tendency has been universal, among laity and profession, to neglect everything but the most obvious and painful ear affections.

Writing of this manuscript was disturbed just at this point by a man bringing his boy into the office suffering an intense earache, the result of snuffing water into the nose while swimming. The pain had been endured for ten days. The ear drum was bulging and red. Patient had increased temperature and a marked tenderness over the mastoid. Patient had been seen by a physician from the onset of the cold in the head. No ear examination had been made with light and specula. Patient was advised to syringe ear with hot water and instill some drops frequently. Patient left his physician and came into our office at the request of his dentist. Naturally the father was disposed to criticize the physician severely. This boy's ear drum should have been incised and the patient put to bed not later than when the pain began.

One especially trained in the diseases of the ear generally sees these cases too late to secure perfect results. To those of us who limit our practice to the special subjects, it is remarkable that neglect is as common in the intelligent and well-to-do as among the clinic patients. We emphasize that the laity are not to blame. If we hope to fulfill the great responsibility entrusted to us by the people of our communities, we must become teachers of health preservation, by laying aside a grave expression and dignified silence, which formerly cloaked a mass of ignorance, and teach in simple language to the laymen the structure, function and dangers common to the ear, nose, throat and mouth, in order that he can keep himself and family well. It is advisable that a small text book on the diseases, and how to prevent them, of the ear, nose, throat and mouth be placed in the curriculum of our common schools, and made a part of the prescribed course. In twenty years our communities would be intelligent, the family physician filling his needful and rightful place, with fewer specialists, more teeth and tonsils preserved, less suffering and greater happiness. However, under our present mismanaged system of impartation of knowledge we as doctors are pledged by the implicit faith placed in us by those who come for our service, to make an accurate and early diagnosis, anticipate and prevent complications, rather than offer a cure.

Before the Muncie Academy of Medicine recently, Dr. Joseph Beck read a paper emphasizing the need of recognizing the space of time that exists between an infection of the ear, nose, throat and sinuses, and the complicated end result. If the patient is seen early, which he would if he had been taught as referred to above, the disease would be recognized, complications anticipated, proper advice and treatment given, and we would have fulfilled our obligation and had an appreciative and well patient. Quoting Newhart again he says, "About 75 percent to 85 percent of all of our ear diseases are preventable, and at least three-fourths of them can be eliminated in a single generation. It is evident that the weight of responsibility lies on the general practitioner rather than the otologist, for it is the former who by his intimate contact with the family is able to give advice when it will be most productive of results. Especially in the community where there is no ear specialist, the physician must fulfill his public obligation by making himself familiar with the principles of otology and the necessary tests. He must detect even slight departures from the normal, and differentiate between lesions of the sound conducting and one of sound receiving apparatus. It is only by the very early recognition of abnormality and the immediate removal of all

active factors that any material advance can be made in combating the insidious affections which cause so large a percentage of deafness, often first noticed by the patient only after he has reached adult age. This point cannot be emphasized too strongly, for the average individual is, as a rule, quite unaware of any gradual oncoming impairment of his acuity of hearing until it is reduced to less than 20 percent of the normal.

VonTrolltsch has gone so far as to say that among persons over twenty years of age, when tested with great accuracy, one out of every three shows some impairment of hearing. Professor Koerner of Rostock made the surprising, but as yet unrefuted, statement that 4 percent of all deaths occurring in Prussia under the thirtieth year of life were due to ear diseases. On the basis of available statistics it has been conservatively estimated that there are in the United States today not less than 3,000,000 persons whose hearing is so impaired as to exclude them from many occupations, and to interfere, more or less, with their educational progress and social contact with their fellows. A single manufacturer of an electrical apparatus to aid the hard of hearing publicly advertises that there are in use 400,000 of his appliances. Within the past twelve months, in our own office, we did a functional test on both ears of 412 patients. One hundred and seventy-four gave as their chief complaint some disturbance of their hearing; 238 gave no complaint of impairment of hearing, nor were conscious of any pathology about their ears. Of these 238 patients who had no ear complaint, 40, or 16.4 percent, showed impairment of hearing. E. W. Kobler, in a paper entitled "A Survey of Ear Conditions in School Children," says, "The ears of 500 New York public school children were examined and it was found that 152 showed relative degrees of deafness."

The American Association for Hard of Hearing in tabulating 174 cases report the causes of deafness as follows: Measles, 6; scarlet fever, 13; meningitis, 13; diphtheria, 6; syphilis, 8; catarrh, 70; nerve deafness, 16; hereditary, 8; oto-sclerosis, 2; child birth, 1; occupational disease, 2; unknown, 29. The medical profession cannot escape the accusation that it has failed of its purpose when it is shown that 70 out of a total of 174 deaf people, practically 50 percent, is due to catarrh. What is catarrh? In the simplest terms the word spells contact of mucous surfaces somewhere in the upper respiratory tract and is preventable. To whom shall the layman appeal for information to prevent this awful waste other than the medical profession? The remedy is simple enough when thought of in a systematic way. First, a knowledge of the anatomy and physiology of the ear, nose, throat and mouth. The nose commands more attention as it is the outer guard or sentinel of safety. Given an infant with a normal respiratory tract, keep its nose open so that the air breathed passes freely, is warmed, filtered and moistened, the normal mucous secreted is evaporated by the air passing through, and this child should grow into healthy manhood without ear trouble or diseased pharynx or larynx. If hypertrophy of the adenoid occurs, it will have to be removed. The child's face will need to be protected from falls from beds and high chairs, the latter an evil which should never have been invented. In its young manhood and womanhood the modern athletics of basketball, football, and boxing should not be indulged. A paper could be devoted to the evils of these modern athletics. Heart, kidneys and central nervous system are impaired during training season and college contests. Just about the time the individual assumes responsibility in the business world he finds that he has catarrh, impaired hearing, frequent attacks of tonsilitis, rheumatism, and all the sequels of focal infection.

The duty of the doctor is primarily that of a teacher to his clientele and for examination of his patients he should possess a light, head mirror, tongue depressor, rhinoscopic and laryngoscopic mirrors, pillar retractors, and know the proper position to place his patient for examination. These can be easily mastered and obtained from any of the text books on ear, nose and throat. Keep the nose open and free to function, acute otitis media and mastoiditis will be reduced to a minimum, chronic catarrh of the middle ear and induced deafness will disappear. Hypertrophied and infected tonsils will not be met with.

No field of medical endeavor is receiving the attention that the upper respiratory tract is. The goitre specialist, heart specialist, genito-urinary specialist, internist, in fact the majority of patients are subjected to a scrutinizing examination by these men for focal infections about the nose, throat and mouth before forming a judgment or outlining a plan of procedure of advice and treatment.

A study of the nose internally includes septum, turbinates and sinuses. Both chambers should be equal. Septum should be straight and free of spurs, ridges or other deformities. Turbinates should hang free in their respective chambers. Especial attention should be paid to hypertrophy of posterior tips of inferior turbinates. If any of these are in contact by reason of hypertrophy, deviations, spurs or ridges, the condition is pathological and chronic rhinitis results. Tubal catarrh will follow with an end result of impairment of hearing. These abnormalities favor sinusitis by reason of obstructing outlets for drainage and aeration. We estimate that fifty percent of the hay fever and asthmatics

are due to mechanical defects in the nose. Our results show marked improvement and cures in about that percentage of cases.

One must know that the sphenoid and posterior ethmoid sinuses empty into the superior meatus and drain posteriorly into the naso-pharynx. The symptoms are stuffy nose, discharge into the throat, headache, and discomfort over the bridge of the nose. The frontal, maxillary and anterior ethmoids empty into the middle meatus and discharge found here indicates infection in one of these. The discomfort and pain usually point to which affected. Obstruction for air into any of these sinuses will cause a sensitization of the walls and produce pain. Ulcers and localized indurated spots in the nose suggest syphilis, tuberculosis or malignancy.

A study of the pharynx includes the naso-pharynx, oro-pharynx and laryngo-pharynx. In the naso-pharynx one will see the posterior tips of the turbinates, the posterior end of the septum, mouth of the eustachian tubes and the adenoid. The common pathological conditions found are hypertrophy and inflammatory.

In the oro-pharynx are the faucial tonsils lying between the anterior and posterior pillars, posterior pharyngeal wall, lateral pharyngeal wall, lingual tonsil at the base of the tongue, epiglottis and uvula. Inspection of the oro-pharynx always includes the mouth, tongue, cheeks, palate and teeth. The size of the tonsil is no criterion as to the pathology present. A large hypertrophied tonsil will be obstructive, but owing to its constant washing by saliva it will of necessity carry less infection than a small embedded tonsil. Attention must be called to adhesions of the pillars to the tonsils. Foci of infection are frequently hidden beneath a small adherrent pillar. With a pillar retractor tonsils can be easily expressed and direct inspection made of the contents. If the pillars are red, infection is present.

Lingual tonsil is a frequent cause of a tickling cough, due to hypertrophy and coming in contact with the epiglottis. This is more often a cause than enlarged uvula.

All these parts are subjected to acute inflammations. Any ulcers always suggest syphilis, tuberculosis or malignancy and should be watched carefully. Avoid caustics, simple ulcers heal of themselves in a few days.

The laryngo-pharynx is a continuation of the above down to the esophagus. It is subjected to the same inflammatory conditions.

The relation of the ear to all of these nose and throat conditions must never be lost sight of. Most of the ear conditions are direct continuations of inflammations elsewhere and should be examined frequently and carefully during any nose and throat affection, especially during exanthematous attacks.

A study of the ear includes an inspection of the auricle and external auditory canal. It should be remembered that the later is one and one-quarter inches in length, narrowest at the middle. The highest point of the floor is at the middle. Its direction is first upward and backward and downward and forward beyond the narrowing. To straighten, the ear must be lifted up. In infants, the upper and lower walls are in contact, due to lack of bony development. The drum closes the canal at an oblique angle. The knowledge of the obliquity is essential in determining abnormality of the drum and in incising. The outer half of the canal has hair. Furunculosis exists in this part only.

It should be remembered that the middle ear cavity is approximately the size of a grain of Indian corn, and the distance from the drum to the internal tympanic wall is but two to three millimeters. Hence bulging of the drum is produced by very little serum or pus. Any inflammation of the middle ear is secondary to tubal inflammation, which closes internal drainage, and the only means of escape of inflammatory products is by free drum incision.

Incision of the drum should be made unhesitatingly as the incisions heal promptly. The chorda-tympani nerve crosses the drum and may be severed in incision. Loss of taste on the same side of the tongue will be experienced, but is regained when the incision is healed.

Simple tests for locating impairment of hearing should be learned, so that the pathology may be located, whether in the conducting or receiving apparatus.

During the past twelve months we were consulted by 352 patients with various ear complaints. Our records of diagnosis show the following:

Auricle. Impetigo 3, sarcoma 1.

External Auditory Canal. Furunculosis 20, eczema 12, myringitis 2, foreign bodies 4, impacted cerumen 32, ruptured drum—traumatic 1, occlusion by an hyperplasia of connective tissue 1.

Eustachian Tube. Acute inflammation 26, chronic inflammation with hyperplasia 38.

Middle Ear. Acute catarrh 6, acute purulent middle ear 76, chronic catarrh middle ear 58, chronic purulent middle ear 30.

Mastoid. Acute mastoiditis with operation 46, chronic mastoiditis with operation 10.

In this series of 342 ear cases, 258 were complications that should have been prevented. The intelligence of the patients should have been sufficient to have induced them to have sought relief early, and of those who did consult a physician early the advice and treatment administered should have arrested the advance of the disease.

In the series of 56 operated mastoid cases,

five were bilateral; ten were advanced sub-periostal abscesses. There were five cases of lateral sinus thrombosis, three of which were of long standing when seen. The three promptly died of general septicemia. Two were in the hospital under close observation when the pathology manifested itself. Both made uneventful recoveries due, we think, upon recognizing sinus thrombosis, and operating immediately after the first chill and sudden rise of high temperature. Three cases developed tempero-sphenoidal brain abscesses, two of which were in the lateral sinus group. The two that were moribund when admitted to the hospital died, one due to a rupture of the abscess and pouring of pus into the ventricle of the brain. This case did not have a thrombosed sinus. The second died from general septicemia, the abscess was evacuated. In the case which was in the hospital and carefully cared for, the abscess was evacuated, and the patient made a good recovery. One case died post-operative from meningitis. She came to operation six weeks after being advised that a mastoidectomy was necessary. Meningeal irritation was present at time of operation. Any one of these seriously complicated cases could be recited in detail, with much interest to this section, and stimulate discussion of great importance to us as a body of specialists. However, that is beyond the intent of the purpose of the paper, and I have incorporated a perusal of them only to emphasize that they really exist and are frequent in occurrence. The results obtained in the two successfully conducted sinus thrombosis cases demonstrate that one should not delay in suspected sinus thrombosis to operate the sinus upon the advent of chill and high temperature. To wait three or four days to make sure is depriving the patient of an almost surety to live and reducing him to a doubtful chance. Of course you will understand that in the cases we are under most grateful obligation to the internist, neurologist and ophthalmologist. Without their co-ordinated skill and knowledge we should have been tremendously handicapped.

In our office we have practically come to the conclusion that mastoiditis, like appendicitis, should be operated upon diagnosis. In my student days I was taught watchful waiting in appendicitis. The laymen know better now. The complications in mastoiditis are equally grave, unoperated the fatalities as great. Shall we be laggards in our specialty? The general surgeon cannot announce edicts for us. Years of improper teaching has led the general practitioner and layman to look upon mastoidectomy as an operation of such serious import that it is done only when imperative. This idea is wrong. The operation is relatively simple, and safe in skilled hands. Once that a patient has mastoiditis he is as sure of a recurrence as the patient in the appendix case. The operation is of no greater risk.

DISCUSSION

DR. GEORGE W. SPOHN (Elkhart): After thirty-five years' experience I naturally have different views than I had when I was the age of the essayist. I agree with Dr. Kearby that the general physician should be better prepared for ear work. As it is he does all kinds of work, even operating upon anything that presents itself. Most specialists practice the art because it offers better opportunities for *good work*. It would seem that their field would be small, and yet they realize that one cannot cover the whole subject of medicine and do justice to the patient.

I hope that no general man will treat an ear case but will refer all such to the specialist, not expecting any compensation from the specialist for so doing. There are some physicians who will attempt to treat eye and ear cases, not knowing how many eye cases become blind and how many ear cases become wholly or partially deaf because of wrong first treatment.

I agree with the essayist that many cases of otorrhea might be avoided if handled rightly, but is the general practitioner to blame for an infection that has passed up the eustachian tubes? Politzer tells us that all cases of acute ear infections carry with them an involvement of the mastoid. From what I have seen in my work the trouble lies not so much with the general physician as with the parents. Though it may be an offensive subject, yet it is a fact that very few infections ever pass up the tubes if the nose is rightly blown. If our welfare stations and teachers would teach children how to blow the nose, there would be very few cases of otorrhea. You will not agree with me upon this question, but it is a question of physics, pure and simple. If one studies the mechanism of the ears and teaches the physiology of the ears to the children, there will be fewer cases of colds, nasal discharges and otorrheas.

DR. ALBERT E. BULSON, JR. (Fort Wayne): In the main I agree with the essayist that a general knowledge of ear affections is desirable, and yet I am satisfied that the old saying, "a little knowledge is a dangerous thing," is very true when it comes to the recognition and treatment of ear diseases and especially those that lead to serious consequences. The trouble of it is, the man who has had only superficial training and a limited experience is not very qualified to decide when a condition is serious or not. A condition that is very serious or may lead to serious consequences may appear to be very simple to the average practitioner and vice versa. However, I do believe that every physician should be able to differentiate between a normal ear drum and one that is congested, though even

in attempting that I have seen some serious blunders made by well trained general practitioners who really have had considerable instruction in the use of the head mirror and speculum and the recognition of acute inflammatory conditions of the middle ear. It has been my observation that the very best general practitioners do not rely upon their judgment at all, though they have sufficient training to recognize the possibility of ear complications as being a factor in producing certain symptoms, and in justice to the patients as well as themselves they call a specialist to their aid. To me the most important thing is that the physician should recognize the possibilities of the ear trouble rather than be able to recognize the ear trouble itself. Already we are burdened with too many pseudo specialists, and when these pseudo specialists make almost criminal blunders, how are we to expect the general practitioner to do any differently when he has even less training? I do not agree with the essayist in the assertion that the general physician should be able to make functional tests of the hearing and differentiate between diseases of the sound conducting and sound perceiving apparatus. He will serve his patients best if he recognizes his limitations, and while I am heartily in favor of educating the general physician up to the point where he can distinguish abnormal ear conditions and their possibility for harm, yet I think that is as far as his attention to the patient should go if the patient's best interests are to be served.

DR. GEORGE F. KEIPER (Lafayette): As Dr. Bulson has just stated, the best equipped men in general practice will not treat the cases cited in the paper. Permit me to give a leaf out of the experiences encountered by myself. We have some practitioners in our city who do a great deal of practice among children. They know what many another does not seem to know, that a fever in a child may be due to an incipient otitis media purulenta. In such an emergency they shift these patients to the otologist, who finds the diagnosis correct as a rule. The ear drums are opened, as ear drums should be opened, and the fever promptly subsides. The child promptly recovers with no ear complications. How often do we see the other condition of affairs where the little one is allowed to suffer until the ear drum ruptures itself, and in the meantime an acute mastoiditis is the complication.

But we are in a poor way to advise our brother practitioner what to do until we clean house among ourselves. It is a notorious fact that of all the men and women practicing in these specialties, three out of every four are not competent to practice ophthalmology and otolaryngology, and until we clean house among ourselves the general practitioner will not take very much notice of what we may say or write for his or her edification. But if we approach this subject in a becoming manner, humbly, willing to show the profession how to treat these patients and what it means to neglect the means at hand, I am sure that they will then be ready to give the attentive ear, and their patients will profit thereby.

There is coming—and it must come—a standardization of these specialties. It has already been instituted in ophthalmology. We now have the National Board of Ophthalmic Examiners. We are hoping that this day is dawning in otolaryngology, and, in fact, efforts are now being made to that end. With these boards in existence it will be but a matter of time until every one essaying to practice in these specialties must appear before these boards to establish competency. At the present time it is voluntary, so far as the Ophthalmic Board is concerned, but to date many have been willing to submit to the examinations of the Board to determine their fitness. When all this is accomplished the general practitioner will regard these specialties with more favor. The postgraduate course of six weeks to three months must disappear before the seminar of a year at least for preparation leading to the practice of ophthalmology or otolaryngology.

DR. C. H. MCCASKEY (Indianapolis): I think it is generally true that the average medical school is now trying to teach its students the fundamentals of otolaryngology—not to make them practitioners of this particular specialty, but they are trying to make them understand the normal, as nearly as possible, and in doing that they are usually taught to find the pathological. Students are taught something about the inspection of the normal ear. These men, when they go out from school, do not wait until a child has a bulging ear drum. They find it before it begins to bulge, when it begins to redden—for instance, in scarlet fever, or measles, or any other acute, infectious disease of childhood.

I am perfectly willing to admit that we need some housecleaning among ourselves. There is certainly a tremendous feeling on this. My personal opinion is that any practitioner of medicine should be quite as well acquainted with his head mirror, and his instruments for examining the ear, nose and throat, as with his stethoscope. The man who is doing the whole field of medicine is not as keen with his stethoscope, perhaps, as is the man who is listening to the heart day in and day out.

My plea is not that every practitioner should be an otologist, but he should know enough about it to recognize the pathology early, and he is the fellow who will recognize the normal condition and the pathology that follows—infection or what not. The man who cannot do

this is dangerous. I think we can prove that in our own clinics and hospitals.

Somebody said at Kansas City a year ago that the young undergraduate should know enough about otolaryngology to make him a good interne. Practically all of our boys go through hospital training and if they have had enough teaching of otology to make them good internes they will know a little something about early diagnosis of these ear troubles, and if they are fairly conscientious they will not do the wrong thing.

DR. M. H. KREBS (Huntington): I desire to second Dr. Bulson's statement in regard to those men who don't know very much. At the same time I want to say that I do not think that we should condemn some of the general practitioners who are doing ear work. Since the war a number of the men who were in general practice have found that they were unable to continue their general practice. They saw the men who were doing specialty work, and they immediately went to schools which claim to train men in specialties in two to four weeks. I really think that the necessity for doing house-cleaning among ourselves is owing to the fact that so many of our men who were in the general practice have gone into this special field of medicine, and not being properly trained they give us as much or more trouble than the general practitioner. I have great respect for the general practitioner.

I can cite one case where a general practitioner had as a patient a little boy with an intermittent fever. He called me into the case. I examined the boy very carefully, but could not establish any diagnosis of mastoiditis, and the x-ray pictures didn't show any mastoiditis. Yet the child went right along with fever, and the doctor kept insisting that there was trouble somewhere, and he believed it was in the mastoid. Finally we went in there, and both mastoids were involved. There was a purulent infection of both mastoids. So I have great respect for the general practitioner, and I want to take issue with Dr. Spohn in his assertions.

DR. D. O. KEARBY (closing): I qualified the paper early by saying that while all men may not learn the technique of operation or treatment, every man should know enough so that he will be able to recognize a condition, and then select somebody that is capable of taking care of it.

My experience in Indianapolis with our pediatricians is that they are good diagnosticians, and I have not had the sad experience of having to follow where they have attempted to open an ear drum. If they do that kind of work, I don't know it. My friends who are taking care of children, when they find otitis media, recognize it, and call upon some of us to help them out in the treatment.

When I was a medical student twenty years ago, I was taught scarcely anything about the ear, nose or throat. As I practiced medicine, my patients became my friends, and I soon realized that I should be able to recognize diseases common to the nose, throat and ear, not to be able to do a mastoid in order to make a few dollars, but to be able to recognize the condition of the ear drum before a mastoid complicated it; that I should know sufficient about the nose to recognize that chronic rhinitis is due to malformation of some sort, and refer the patient to somebody who could take care of him properly.

In this paper no blame has been attached to the family physician anywhere. It was written in hopes that it would stimulate him to carry in his grip that sort of equipment, so that in the treatment of ugly, infectious diseases, of which we have so many, instead of depending entirely upon the stethoscope to listen to the lungs, and the thermometer to get the temperature, he will study the ear drum, not with the idea that he is going to open it, but to know whether it is, or is not, infected, and thus save the patient from a complication.

My plea in the paper, gentlemen, has been that every practitioner should have sufficient knowledge of, and be sufficiently acquainted with, the simple instruments that we use, to use them properly, make a diagnosis early, and then correct the condition before a complication arises.

SAND BUR IN THE LARYNX

REPORT OF A CASE—ENDOSCOPIC REMOVAL

GEORGE F. KEIPER, M.D.

LAFAYETTE, INDIANA

Apparently the presence of sand burs in the larynx or trachea is of infrequent occurrence. Reports of such cases in medical literature are very rare. At the last meeting of the Section on Laryngology and Otology of the American Medical Association, Dr. H. Marshall Taylor of Jacksonville, Florida, read a paper on this subject. He reported a series of nineteen cases, in sixteen of which the burs were removed from the larynx, and in two from the right bronchus. But very few were able to participate in the discussion which followed, owing to lack of similar experience. Even the high priest of endoscopy in this country, Dr. Chevalier Jackson of Philadelphia, had never extracted such a foreign body from the tracheal tree, and he has removed about everything else along this line.

From private conversation subsequently with a large number of the men present at that meeting, I learned that none of them had ever encountered such experience. Yet sand burs are found all over the country wherever sandy

places abound. After thirty years of laryngological experiences I never had such an experience either. However, since that meeting it has been my good fortune to encounter such a patient and to remove the sand bur endoscopically.

On August 8th this year I was asked by Dr. George R. Clayton of this city to remove, at St. Elizabeth's Hospital, by the direct method, a sand bur from the larynx of Miss Mabel L., age 16, of Medaryville, Indiana. Her general condition was otherwise normal save for a temperature of 100 degrees F.

Two days before, while playing with the sand bur, in an unguarded moment she placed it in her mouth, and a sudden inspiration caused it to be carried into the larynx. It lodged on the right vocal chord.

Her family physician attempted its extraction unsuccessfully by the indirect method. Dr. Clayton likewise failed. When I looked down the throat with the mirror it looked so easy that I attempted it thus and failed. I have vowed several times that I would never even attempt the indirect method again.

After the failure to extract it indirectly, we laid the patient on the table with the head extended over the end of the table, and supported by Dr. Clayton. I then inserted the Jackson speculum, caught up the epiglottis and gently entered the larynx. The sand bur presented beautifully and with the tubular forceps I grasped and removed it, a maneuver taking only a couple of moments of time. I exhibit the specimen to you to show you what a dangerous thing it is to have in one's breathway.

Medaryville is situated in the northwestern part of Indiana, in a sandy region which becomes much more so as the cities of Gary and Michigan City are approached. Sand dunes abound and these grow sand burs in great abundance, the ground being matted with them.

Taylor in his article referred to reviewed this subject of sand burs in the air passages quite thoroughly and finds eighty-five cases in the literature and otherwise. Seven of these had "successfully run that gauntlet consisting of the epiglottis, upper laryngeal orifice, ventricular bands, vocal cords and trachea to become a foreign body in the lungs". In other words these organs are the watchdogs of the tracheal tree. Of the eighty-five cases, six resulted fatally. One of these was a patient of Taylor's.

In the series reported by Taylor, the oldest was 22, a woman. The others were less than twelve years of age, seven being between the ages of 8 and 12. The youngest was 3 years of age. My case was 16 years of age.

My case also confirms Taylor's observation that an exudate is thrown out over the bur which may be so excessive as to simulate diphtheria in the larynx.

DISCUSSION

DR. D. W. LAYMAN (Indianapolis): There is one point in this foreign body work that I wish to bring out, because I feel that a great many physicians who are not acquainted with bronchoscopy and esophagoscopy look upon the general conditions, physical conditions, anatomical conditions, the manual dexterity necessary to remove foreign bodies, etc., just about the same whether the foreign body be in the upper respiratory tract or in the esophagus. This is a common error, and the physicians should be taught that these conditions are entirely different. In the first place, in the esophagus you are dealing with a collapsed tube. In the upper respiratory tract you are dealing with the upper part of the esophagus, which is supplied with muscles, and the musculature there produces spasms more marked in some cases than in others. In dealing with the esophagus you have a tube that is more apt to rupture in manipulation. You have not that sense of sight and touch that you have in the more open tubes. The upper part of the esophagus being open and having larger spaces, the foreign body is more apt to be hidden in the folds.

On the other hand, in the lower part of the esophagus, you might say from the thoracic aperture, you have a negative pressure. If the body has passed the thoracic aperture, it is apt to be turned downward.

In giving a general anesthetic for foreign body work in the esophagus, the foreign body is more apt to pass and be forced downward than is a foreign body in the upper respiratory tract, because of this relaxation and this muscular spasm in the upper part.

DR. ALBERT E. BULSON, JR. (Fort Wayne): I congratulate Dr. Keiper upon using the direct rather than the indirect method in removing the sand bur from the larynx. The time has come when we ought to get away from the idea of removing foreign bodies from the larynx by the indirect method. Direct laryngoscopy and bronchoscopy is now so well established and is such an excellent procedure that it ought to be adopted by every operator.

Inspiration of sand burs evidently is rare. I have seen one or two cases of sand bur in the throat but not in the larynx. In one case there was great suffering from spasms of the glottis. The interesting feature of these cases is that for the most part the foreign body can be removed without giving a general anesthetic, and that is a matter of great importance.

DR. ADAM B. KNAPP (Vincennes): Twenty years ago I had the fortune, or misfortune, to see a case of sand bur in the larynx. The mirror showed the sand bur lying against the lower

surface of the vocal cords. It could be seen just as plainly as if I had had it in my hand. I did not make any effort to remove it, as all surgical procedure was refused. The young girl carried the sand bur for about twelve months, and was able to speak in a whisper, but not above a whisper. At the end of that time she had a spell of severe coughing, coughed the sand bur out of the larynx, and brought it to me, to show me that she had delivered it. The spines of that thing were just as long and just as hard and firm as the day she inspired it. What happened to bring it out I don't know.

DR. GEO. F. KEIPER (closing): I used a local anesthetic, a four percent solution of cocain swabbed on the pharyngeal membrane only, none in the trachea. It is advisable to work under a local anesthetic. General anesthetic is very dangerous, and should be avoided.

I have searched the literature for similar cases, using Dr. M. A. Goldstein's Review published in the *Laryngoscope* every April. I ran that way back and could find no record like Dr. Taylor's, and mine. Sand burs are very prevalent and surely many other physicians have encountered similar experiences which they should record for the benefit of the profession in general, and their patients in particular.

As to endoscopy in general: The indirect method is out of date. The direct method is so much better if you know how to use it. But be sure that you learn it first under careful tutelage and by the dint of much practice, one way or another thereafter.

A MEDICAL SERMON*

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The time limit cut out most of my sermon, but I shall state my text from the 30th verse of the 15th chapter of the Gospel according to St. Matthew, who said: "He that is not with me is against me, and he that gathereth not with me scattereth abroad." For ten years I have preached this sermon, and tonight I preach it again. The subject is more vital tonight than it was ten years ago and unless the medical profession as a unit meeteth in my name it scattereth abroad.

I hope I am not hyperesthetic! I hope I am not an alarmist! I hope my vision is clear when I say I see in the distance the dark cloud of socialized medicine still coming our direction, gathering as it comes many blind and selfish groups and individuals.

Let us first consider what changes have taken place, what changes are taking place, or are about to take place, which changes make it necessary, desirable or unavoidable to socialize medicine. Up to the last generation, or about, the pauper was perhaps the most important practical question with which the medical profession had to deal. The old English idea that charity was more or less a disgrace prevented to some extent the growth of socialistic ideas. Now days when charity working has become as distinct a profession as law, is it any wonder our ideas are gradually being moulded in favor of the state's supervision of poverty and charity? The growth of industrialism with its increasing competition has made it necessary to have someone look after the sick and maimed so that the grist from the mill will not stop. The harangue for efficiency has attracted the attention of the employer, the economist and the sociologist, and has helped to give birth to the social worker. The social worker by clever propaganda has not only evolved and refined her position into a profession of extreme honor and necessity but has been seized upon by medical socialists and made into willing tools for the sowing of seeds of socialism in medicine. Modern medical education, vague ideas in regard to the relationship between the medical school and people, rapid strides of medical science, especially in regard to the causes and prevention of disease, have added impetus to the campaign for centralized, nationalized and bureaucratic control of medicine and of the medical profession.

Medical education is now such that the graduate refuses to go back to the country town where he has few luxuries in life and small opportunity of practicing experimental medicine according to the latest theory from the laboratory.

Thus, paradoxically, modern medical education has given the honest and dishonest propagandist the erroneous idea of a scarcity of physicians. These reasons, together with economic factors, gave Julia Lathrop the chance to say to the congressional committee in charge of the Shephard-Towner bill, "Why put this work in the hands of an already overworked class when there is now a scarcity of physicians in the country, and when women social workers can do this work as well? This is a social problem." We know she was uninformed or purposely misrepresenting; and as for a social problem, I have never seen any sickness or injury which was not a social problem, and will be, so long as there are any relations between members of society.

The world war with its rapid destruction of man power and material wealth has promoted the desire for a flawless machine to replace those losses, to prevent future losses, and to be prepared if such future losses become necessary. With such mixed altruistic and selfish purposes existing, much confusion of action and thought

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exists. Such mixed purposes and confusion has led to the jumbled up ideas of socialism, bolshevism, communism and other isms of which socialized medicine is one of the wobbly wheels. This reminds me of the old champion mower. This machine in place of the straight pitman rod had a complex universal wobble gear to give cutting power at any angle. It was a wonderful selling point, but it wouldn't work. The end nearest the power cut high, and the one farther away cut low, and there was no chance to exchange ends. In like manner socialized medicine, with a high and low cutting end, is only a selling point. The agents are many, various interested individuals and groups who fail to say when selling that when a man is underpaid, under compulsion, or his initiative taken away from him and vested in a high cutting end close to the power he refuses to do good work.

Faculties of medical colleges are apparently not satisfied with their positions as salaried men with the privilege of private practice brought to them by the advertisement of their position, but in many instances covertly or openly attempt the building of state machines with themselves as the respective heads, relegating to private practitioners the honorable position of reference physician to the people. You are doubtless aware of what was attempted in Michigan by the state medical school. You have seen with what poor grace those men backed out of their position. Dr. Hugh Cabot is reported to me as having said one of his reasons for coming to Michigan was because that state would be next to take up state medicine. You have heard what Cornell and Harvard have done, what Buffalo is doing and you can surmise what may be done in other states when the time seems opportune. What these schools have done can easily be done by any organization financed by state taxes or by a philanthropic endowment. It is needless to discuss the effect upon the economic stability and development of competing industries if some were able to endow themselves through charity or the state. At Cornell we have a charity endowed clinic in competition with private practice. In Michigan we had the attempt of a state endowed institution in competition with private practice. I ask you what is the difference between state endowed industry in competition with private industry and between a charity endowed clinic, or a state endowed institution or a charity or state subsidized doctor in competition with private practice?

The recent enfranchisement of women has given to that sex an enlarged idea of importance in government. This idea, born of the maternal instinct, seeks its outlet naturally through state medicine and other socialistic schemes. Mothers are making their appeal through pictured useless and avoidable suffering of maternity and of their babies. Those who are not mothers, and those hopeful women who cannot be mothers, make a dangerous appeal to sentiment, and you have a hard time beating sentiment. These women are dangerous because you never know what they will do. Their rhetorical figures of speech are treacherous. They say all people are learning how much misery sickness causes and are demanding the decrease of misery. They say the state cannot afford sickness, must have health, no matter how it comes. They tell how advanced medical men preach it, that business and insurance men say it will pay, that social workers ask why we go on building institutions, that people are tired of being lied to and of being fooled, that it is a lie that anyone who wants medical attention can have it, that the patient no longer can afford to pay what the doctor has to charge, that if the doctor does not find the way by which expert work can come within the reach of all, they will. You have been aware for some time of the effect of the impression slyly left, "we have something for you which you can't get anywhere else."

Nurses in industrial nursing, school nursing, public health nursing, state medical school propaganda work, have helped to spread the glad tidings.

Compensation laws with all their disagreeable features were passed while the medical profession stood in wild-eyed rebellion saying, "they can't do it", but they did.

The increased cost of sickness to the individual brought about by the increased cost of medical diagnosis, nursing, hospitalization, has led to a demand for lower costs and has found its answer in the propaganda of the wily physician who has made a failure of practice, the nurse who despises private case work, the social worker who draws a good salary for attacking the medical profession as the least dangerous opponent and the most obvious person on the scene, the faddist engaged in the noble profession of uplift work, the uninformed laborer who thinks he is going to boss the doctor, the politician who thinks he is going to stay in office by offering the people something for nothing, the lodges which offer much for little, and the poor blind innocent who knows only enough to turn her head parrot-like and squawk state medicine.

We also hear occasionally from the women members of the profession. Dr. Philbrook of Lincoln, Neb., (I apologize for quoting her), says that no male member of the profession is fitted for treating women and children, further saying in regard to the Shephard-Towner bill, "seriously it is a matter of rejoicing that at last in the march of social and political evolution a public fund for the amelioration of maternity and infancy is to be administered by persons

possessing not only the highest social and medical training but also the inherited instincts of age long motherhood". I quote this to ignore it, but at the same time to call attention to what silly prattle can be used for propaganda which may with unthinking people cause an unwholesome influence.

The Rockefeller Foundation, rich in money which you and I have helped create through our forced tribute to a system not to our liking, has for the purpose of creating a school of public health given millions to Johns Hopkins, whose purpose we can only guess through its attempt at controlling and regulating fees. Such foundations, dangerous in a democracy, may, through gifts to institutions, mould public opinion.

New York State in its legislature has just killed a bill to meet the requirements of the Shephard-Towner bill. Such bill will be introduced in other legislative assemblies. Other bills in regard to medicine and health are to come up in the various legislatures and in the next session of congress.

I have briefly stated past, present and future movements whose purpose was or is to mould public opinion in favor of some form of state medicine. I understand you were told state medicine is dead. In the light of what you are reading every day, of what you are observing; in view of the fact that some of the officials of the A. M. A. are nasty when their vision or purpose is questioned, and that the A. M. A. is to discuss its attitude at the coming meeting; in light of the fact that a recent communication to me from Samuel Gompers says the American Federation of Labor has never stated its position but will have a committee report and discussion in June at its Cincinnati meeting—do you believe state medicine is dead? I do not, and I beg of you not to believe it. Let's not be ostriches, sticking our heads into the sand. While we sleep, or fume and fret with each other over petty affairs, state medicine is insidiously creeping on, and some day we shall awaken to find a new system with which we had nothing to do with the making. No, it is not dead, and I, for one, shall not rest until it is dead and buried and its vault so closed that no social angel can roll the stone away. Why does it not die? Does a bona fide health problem exist? It either exists or the socialists, social workers and bureaucrats are making a concerted attack upon the medical profession in the creation of a new division of labor from which they expect to derive many good paying jobs. I cannot quite bring myself to believe that it is merely a conspiracy for the creation of salaried jobs for women and men who hold themselves above standing behind ribbon counters, and yet it is sometimes not clear if these self-styled promoters of the evolution of society, both lay and professional, are really interested in health, why they make their chief attack upon the medical profession instead of upon the economic system, the legal system, drugstores, housing, Christian Science, chiropractic, etc., unless it is because they see in the medical profession the most weakly organized opposition, and because it is only the medical system which the social worker intends to socialize and supervise.

My ten years of experience with social workers of every known classification has led me to believe that the social worker hopes sooner or later, in a state system, to control and supervise a great part of the medical profession and practice. It does not touch the situation for the medical profession, drunk in its own conceit, to sleep soundly on, oblivious of the changing, seething mass of humanity. If we were living and dealing with nobility, we might justify our attitude of noblesse oblige. But society still exists much in the animal stage.

I believe there is a problem or condition existing which demands the earnest thought and analysis of the medical profession. The question of the poor, which we have had always, is not now the only one to be considered. Our social, economic, industrial organization is no longer simple. So now, with the wonderful growth and complex development in our industrial system, with millions of people, with the development and evolution of our various systems in mass, losing sight of the individual, with the increasing costs in hospital, medical, surgical, diagnostic and preventive care, with the newer ideas as to the value of human life and good health, the question is—do the existing measures and means adequately fulfill the demands? A great many individuals and organizations do not, and we shall see briefly on what basis they have tried to solve the problem. Insurance companies, organized for profit, use the doctor merely as a servant in the formation of profit and their solution has not been encouraging to the medical profession. Lodges offer contract practice at a fee, usually so small the doctor shirks thorough work to the patient. Charity organizations offer contract practice or ever increasing burdens. And the howls of the medical profession from this burden has placed a big stick in the hands of state medicine advocates. These advocates are quite solicitous of the welfare of the profession. They are saying it is not right for the doctors to have to care for all these people for nothing. They know the alternative is a state system with many good social jobs. We know the state rarely pays well where it should. We know the doctor would be underpaid, subject to call day or night at the whim of the patient or social worker.

and be subject to fines and control. Regardless though of how humorous this solicitude for the profession's well being is, it is telling, and the medical profession will sooner or later have to decide between the two or offer something constructive. Social service and public health nursing associations are really not so much concerned with the system just so it promotes their growth. They champion the cause of the patient as against the doctor. The chief fault here lies with the doctor or profession for not having enough constructive lime in its constitution to compel right relations. Industrial organizations are profit seekers with a desire to subordinate *everything* to industry. The U. S. P. H. department, in accepting rich and poor in its clinics, is developing a system detrimental to the profession and ultimately to public health.

Now what is the medical profession to do? Are we to be stampeded or magnanimous? Are we to listen to the words of the wily, and be deceived into believing there is no problem and no use to act or worry? I think we Americans are often inclined to live in an atmosphere of illusion. At any attempt of one to pierce this canopy of illusion we shrink. Especially as doctors of medicine, perhaps through the example of the A. M. A. officials, we assume an attitude of "the king can do no wrong". But illusion is not successful and if we do not bring ourselves into the light, and if we leave it to others, we will be groping and singing the old song, "Lead Kindly Light".

The social cry is now for good health, that it is only one of many human problems, and if we do not tackle it, industry through the help of hundreds of interested agencies, private, state and municipal, will—for at the present time they have their eyes riveted upon this problem and are so charmed they cannot remove them. We must become the charmers. We must direct both for the profession and people the trend for health education, and in many respects reverse the present trend. Instead of the Prussian idea, God state, we must substitute the more correct idea of a vague term standing for that which should be but often isn't. Many seem not to know that "the state" or "government" separated from the halo of idealism and patriotism, disillusions itself into a mere ruling political set. We must show the people that the happy and successful treatment of disease and misery is personal and individual; that it cannot be done happily en masse, like the turning out of Ford cars; that any clinic system or state system breeds quantity and not quality; that such systems will not change human nature, either in doctor or patient; that such system has failed where tried; that in Austria the system broke down early and left the doctors as mere hangers-on and the people without service; that in England the doctors now carry it on only through patriotism and devotion during the period of reconstruction.

We must not only educate the layman, but overcome the layman's educating the profession, for we must not forget, as Mr. Pritchett relates, that as a matter of fact the practice of medicine, the profession of medicine, since historic time, has been affected almost as much by the layman as by the profession. This as I think, and as I think Dean Emerson in his most interesting and instructive articles on the history of medicine has shown, is extremely dangerous. Further with Mr. Pritchett, the layman cannot distinguish between medicine as science and as an art of healing. He fails to understand the development of medical education along the lines of highly scientific training. He does not conceive medicine as we do, nor is he in position to appreciate much other than the obvious and spectacular. Due to his confusion of thought, he suspects as selfish on our part every legal restriction asked for his own protection. He does not understand why all treatment of disease should come under legal restraint rather than being bred upon one's own belief, religious or otherwise. He can't understand why all matters pertaining to health, individual or public, should be under the control of the medical profession. Even in the profession some can't see why all aids to health, as nursing associations, boards of health, societies, and lodges, should so far as they pretend to promote health first, meet with the approval of the medical profession.

It is an honor to be president of any medical society, but it would be a greater honor to be the president who made his society a vital educational force, with a strong committee on civic policy, divided into sub-committees to look into all matters affecting the profession and the health of the individual, such as private laboratories and clinics, advertising doctors, insurance and compensating companies, civic organizations, municipal and state boards of health, medical colleges, hospitals, publicity in the press, to help regulate ethics, to report to the society and through the society to give out such publicity as will help educate the people.

In regard to the education of the profession, the undergraduate medical school can improve upon the art of teaching, the choice of text books, and the relation and correlation of studies. They can separate postgraduate and undergraduate teaching, cut out the fraud in research work and postgraduate work, cease taking the time of the interne or student in research before he is half qualified in diagnosis, that is, if he intends to practice medicine. College officials and A. M. A. standardized patternmakers should remember that the primary and

fundamental duty of the medical college is to train men to practice medicine and that the general practitioner is the backbone of public health.

If colleges do not adjust their curricula, stop working against the doctor they create, they will soon find themselves working against the people who support them. For some reason the medical profession has not learned how the physician can be a physician, a citizen, a teacher, without incurring the ill will of his fellow doctors. If he is to be branded as a solicitor because he tries to educate the public then the medical societies, boards of health and the medical colleges must assume the position of chief instructors to the community in all things pertaining to health. But the medical colleges cannot wholesomely perform this function, nor the medical profession well tolerate, so long as the college teacher is paid to educate and at the same time be permitted to compete in practice. His advertisement gained at community expense gives him an unfair advantage over the practitioner who is handicapped by professional ethics. Regardless of arguments to the contrary, in a broad sense, as a matter of continued policy and not in a selfish or political sense, I believe such policy unwise and undesirable. Men should take a part of their pay in the honor of their position, and trust, if they so desire, to increased earnings for having held high places of honor and ability. The medical profession should not subscribe to state boards socializing any part of medicine under the plea of education and public health. Boards of health should strive not to force the expense of private health upon the state under the guise of public health. Their supervision of private health and practice will stop progress in medical treatment.

I do not know who was the originator of the idea of state medicine, whether it came from within or without. But I do know there are individuals within and without the profession who are striving openly and covertly to force it upon the people. The president of the National Nurses' Association, in reply to the professional criticisms of Dr. Mayo, rushed to the lay press. John A. Lapp, editor of *Modern Medicine*, went from Chicago to Albany to aid state medicine. Michael Davis of Cleveland and others are fighting for free health clinics and centers. Different individuals and organizations are solving the problem to suit their own desires. We see they offer us nothing. We see we cannot fully trust medical colleges, health boards, insurance societies, U. S. P. H. activities, Red Cross maneuvers, Rockefeller, Carnegie, or any other rich man's foundation, industrial or political organizations, in fact, we have seen we can trust no one but ourselves, and it seems sometimes there is some kind of worm gnawing in our own hearts. We know we have the problem of the pauper, we know the increased cost has made it hard for the middle class, and by way of compliment let me say the reason there is a good solid middle class is because it has been most let alone.

We sympathize with uplifters and reformers, at heart unselfish, but they have become so well paid we mostly distrust. We distrust if we see the monkey in the woodpile and if we do not see him we say he is there just the same. We sympathize with the agents of the Federal Government in a desire to promote the health of the country but not in Federal supervision as in the Shephard-Towner bill. Nor do I believe in the ultimate efficiency of federal bureaucracies supervising state activities under the guise of federal aid or for any state or municipal bureaucracy to supervise the practitioner. Such attempts are un-American, attempts to change our government, and exceed the limitations upon the federal power fixed by the constitution. The Shephard-Towner bill in my opinion would be declared unconstitutional were it decided according to the constitution instead of political sentiment.

We may have to strike at the cost of medicine to the people but not where the lowering of cost will reduce the impetus to scientific medicine. The cost of hospitalization, accessories in diagnosis and treatment can be reduced. The demand for the nurse is as different as the demand for the practitioner and specialist. If every nurse is a $40.00 nurse and every doctor a $25.00 doctor then the cost is too much for many and we ourselves are opening parking places for state medicine. We must find some way whereby the private practice will be more enticing than a federal clinic. We have seen how young graduates went out over the country to various clinics as specialists when in many instances the only qualification as specialists they had was the holding of a federal job in a special clinic organized by bureaucrats. Perhaps we must have more thought for the young men of the profession. Besides adding fuel to the fire of state medicine it does not show a magnanimous spirit to pull the ladder up behind us or to kick out the rounds by which we climb. We must get to the taxpayer in the right light. Right now would be a good time for the farmers to know what state medicine means. Soon as they learn they will find a better way than free treatment and free bed and board for the immoralities of men and women. When they know the medical bureaucratic system in England—and which everybody hates—cost the country $100,000,000 a year and is increasing and will cost us ten times more, they will help us find a way out.

The cry from the masses of people for state medicine comes from the interested group in

each county. The real mass know not what is going on.

But the pauper must be cared for, nor will industrial development be hindered by a procrastinating medical profession. We must come out from behind our intrenchments of the past, realizing that a demand for new relations between the public and doctor is being made, that we cannot sulk in our tents and expect outsiders to settle this demand perfectly satisfactorily to us, that we must take our share in the responsibility, both in the interest of the profession and public, and we can do this only by pointing the way.

We must bear in mind three things—there must be the opportunity for health for every person, protection for everyone against those who do not avail themselves of the opportunity and there must be encouragement for the profession by rewards commensurate with its services. The health problems belong rightfully to the medical profession. This is the portion of man's burden which it must carry. The successful adjustments of such problems and duties as confronts it from time to time will be its answer to society for its stewardship. The medical profession should come together with competent leadership carrying this through the county, state and national societies. But it is time to count heads. We must know where our delegates stand and they must represent the society and not necessarily their own wishes. We must not permit, in the plea for suffering humanity, a bureaucratizing of essential workers. If medicine is not essential it should be abolished, but if it is essential, then it should be as untrammeled as private ownership and have perfect freedom of initiative.

In conclusion, I have tried to show,

1. The elements at work creating the problem,
2. That they have created a problem,
3. What some have done to solve the problem,
4. That no one has considered an untrammeled medical profession in the solution,
5. That it is our problem and unless we wake up, some charmer like Bryan, Hoover, Hayes, will beat us to the answer.
6. That we can solve it through education and organization.

In conclusion, fellow practitioners, I repeat my text—"He that is not with me is against me, and he that gathereth not with me, scattereth abroad."

REMOVAL OF DIPHTHERITIC EXUDATE FROM LARYNX

In taking cultures directly from the larynx, Charles A. Thomson, New York (*Journal A. M. A.*, April 22, 1922), states he has frequently noted that the dyspnea was caused either by loose membrane, which was drawn into the lumen of the larynx by inspiration, thus occluding it, or by a thick mucopurulent material which the patient seemed unable to cough up. In only a small number of cases was the dyspnea due to the attached membrane alone or to an inflammatory stenosis. It was further noticed that this loose membrane came away frequently on the swab; the coughing that followed the withdrawal of the swab frequently expelled the mucus, with the result that the child, who was sometimes ready for intubation, received immediate marked relief; this relief lasted in some cases for from six to ten hours. This observation led to devising means whereby this obstructive material, which tends to recollect after a number of hours, could be removed more thoroughly, thus saving many patients from intubation. A specially devised applicator is used under direct laryngoscopy. It is passed into the larynx just below the cords, and immediately withdrawn. The withdrawal of the swab acts somewhat like the plunger in a syringe, bringing with it a large amount of the mucus and frequently good sized pieces of loose membrane. The result of this procedure was surprising in many cases; patients that were cyanotic and perspiring received as much relief as from intubation—relief that lasted from eight to ten hours, and in some cases was permanent. During this period the child could take nourishment easily, had several hours' uninterrupted sleep and, as a result, his general condition remained much better than if intubation had been done. Usually the applicator treatment had to be repeated two or three times and, in two cases, four times. In no case has pneumonia developed as a result of the treatment, nor did any accident occur from pushing the membrane down the trachea. It was noted, further, that aphonia disappeared earlier in these patients than in those in whose cases intubation was performed. Only those patients were treated who would otherwise have required intubation.

DESENSITIZATION OF HAY-FEVER PATIENTS BY SPECIFIC LOCAL APPLICATIONS

GEORGE M. MACKENZIE, New York (*Journal A. M. A.*, March 18, 1922), claims that the reactivity of the nasal mucosa of hay-fever patients may be markedly diminished by spraying the nose and throat with the specific pollen antigen. In a series of patients given specific prophylactic treatment by this method, the results compared favorably with those in a series of patients treated by specific subcutaneous injections, but were less satisfactory than when a combination of the two methods was employed.

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Devoted to the Interests of the Medical Profession of Indiana
ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.
Editor and Manager

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EDITORIALS

PROTEIN THERAPY

"Resistance" to infection, in its implication of biological reaction to bacterial invasion, has long been considered a strictly specific phenomenon. Theory and laboratory experimentation were largely responsible for this point of view. Only recently Wright has admitted that clinical results have at last forced him to conclude that "inoculation produces in addition to 'direct' also 'collateral' immunization".

William F. Peterson in his "Protein Therapy and Non-Specific Resistance", recently published, says: "It was the clinic that forced upon our attention certain therapeutic results which could not be ignored." With these results we must grudgingly admit we are all more or less familiar—grudgingly because of our antagonism to the introduction of phylacogens, "shotgun vaccines", on what we considered empiric grounds, and to stock vaccines because we believed that the process of immunization varied with different strains of the same bacteria as well as with different species of bacteria. For several years, however, both the laboratory and the clinic have been producing evidence tending to show the marked similarity of all biological reactions to parenteral proteins.

Renaud in 1911 showed that typhoid vaccine had a beneficial therapeutic effect upon a number of non-typhoidal inflammatory processes; Kraus that colon vaccine had practically the same result as typhoid vaccine in the treatment of typhoid. Ichikawa treated paratyphoid successfully with typhoid vaccine and Kraus reported favorable results in puerperal infection treated with colon vaccine as long as ten years ago. From these beginnings the evidence has rapidly accumulated until the use of stock vaccines is commonly accepted, the treatment of arthritis by intravenous typhoid vaccine universally recognized, and the injection of various foreign protein substances such as milk, casein, seralbumin in the treatment of inflammatory conditions admitted as theoretically and practically sound.

Nor is this illogical if, as Peterson points out, "we keep the focus of our attention on the reaction of the body to injury—on inflammation —we find that this reaction, no matter how produced—be it bacterial invasion, intoxication or trauma—is fundamentally similar under all circumstances". In all such processes, however, they may vary in the type of cellular reaction, the amount and composition of the exudate, we are dealing with an effort "to dilute the noxious agent, to remove it by intracellular or extracellular digestion, to neutralize it or to wall it off".

From a therapeutic standpoint but two avenues of approach are open in the presence of a cause of inflammatory reaction. We can attempt to destroy the causative agent by introducing an antitoxin, antibacterial agent or chemical; or we may confine our efforts to altering the inflammatory reaction of the body itself. The latter explains the reason for non-specific protein therapy—it is a therapeusis whereby we alter the reaction of the organism to the etiologic agent by promoting or retarding autolysis by hastening resorption and the reparative processes—and as such its *raison d' etre* can fairly be said to have been established beyond question.

PREVENTION AGAINST DIPHTHERIA

Medical men have not attached sufficient importance to the subject of the control and prevention of diphtheria. All have known of the inestimable value conferred upon humanity by the discovery and use of antitoxin, which has so greatly reduced the mortality, but few seem to appreciate the newer development in diphtheria control brought about by the discovery of the wonderful protective effect of toxin-antitoxin. Heretofore we have been content to give small immunizing doses of antitoxin to children who have been exposed to diphtheria, but such injections only protect the children for about three weeks. On the other hand, toxin-antitoxin protection lasts for years and probably for life. This result is secured in much the same manner that protection by antitoxin is secured, namely, by the injection of small doses of sterile serum into the arm once a week for three weeks. It is claimed that this makes the child as safe from diphtheria as vaccination does from smallpox, and it is asserted by prominent clinicians and public health officers that if every child between six months and five years of age could have this treatment, diphtheria eventually could be wiped out. Until this protective treatment is rather universally used, diphtheria will continue to prevail in various communities with a varying death rate, depending upon the promptness and certainty with which antitoxin is administered. The safety and effectiveness of this protective measure has been established beyond the question of a doubt, and it only remains for the public to become conversant with the facts. The dissemination of the knowledge must come through not only the activity of

health boards but the personal influence of family physicians who come in direct contact with people. The results to be secured are certainly worth while.

DEATH OF DR. EDWIN WALKER

In the death of Dr. Edwin Walker, at his home in Evansville, on April 23, 1922, not only does Evansville, but Indiana and in fact the Middle West, lose one of its most capable surgeons and enterprising citizens, beloved by all who came in contact with him. Dr. Walker had the distinction of being an indefatigable worker, with a mind centered upon scientific achievement and the good that can be done to humanity, and of lofty ideals in his intercourse with his fellow men. He was honored by the American Medical Association in serving as its vice-president. He served as president of the Mississippi Valley Medical Association, and his own State Association honored him many years ago with the presidency. He was at all times devoted to the best interests of the medical profession, and his loyalty to his friends was especially noteworthy. He not only has perpetuated his life's work through the establishment of a hospital which bears his name, but his achievements in the interest of scientific medical progress and in allaying the sufferings of humanity have left an imprint that will long survive.

INDIANA UNIVERSITY SCHOOL OF MEDICINE SUMMER COURSES

Postgraduate courses will be offered during the coming summer by the Indiana University School of Medicine, Indianapolis, during the six weeks' period, June 8th to July 20th, 1922.

Courses will be offered by the Departments of Pathology, Pharmacology, Medicine, Surgery, Gynecology, Genito-Urinary, Rhinology, Otology and Laryngology, Ophthalmology, and Dermatology and Syphilology.

The Department of Medicine will offer a course in internal medicine which will consist of ward rounds at the Robert W. Long Hospital, including methods of medical laboratory diagnosis necessary for the study of patients on the wards.

Clinical work in surgical diagnosis will be offered; also work in surgical pathology. In the former case, whenever indicated at operation, the opportunity will be given to prove or disprove the diagnosis. In the work in surgical pathology, special stress will be laid upon gross pathology and upon the relation of the pathological condition to the clinical picture. Also the prognosis as determined by the pathological diagnosis will be discussed.

A course in biochemistry on some of the more recent chemical methods includes the analysis of the blood, determination of acidosis, detection of diabetes and hyperthyroidism by the determination of the sugar tolerance and the basal metabolism will be given. The work will consist of lectures and practical laboratory work.

The Department of Pathology and Bacteriology will offer courses in pathology and disease production and resistance.

The course in pathology will cover pathological changes in general, and those changes characteristic of the more common diseases, including various infectious diseases, cardiac, arterial, renal and glandular diseases, anemias, leukemias, neoplasms, etc. The course will occupy six weeks, with five lectures per week followed by laboratory periods. Study will be made of the gross and microscopic features of pathological material illustrative of the changes discussed. The projectoscope will be used for demonstrating microscopic changes in the sections to be studied. Those enrolled in this course may attend all autopsy examinations made by the officers of this department during this period.

The course in disease production and resistance occupies six weeks with three lectures and three laboratory periods per week, and will summarize the present understanding of the mechanism by which various disease manifestations are produced, and the reaction of the body to the various forms of injury. The major portions of the discussions will relate to diseases of bacterial origin, but the pathological physiology of toxemias, mechanical injuries, burns, neoplasms, and diverse other disease processes will be presented. Stress will be laid on the reaction of the body to the various forms of injury, and the relation of this reaction to the course of the disease and to symptomatology. The principles of immunity and the application of the various serological tests and other immune reactions to diagnosis will be presented together with the relation of serum and vaccine therapy to the mechanism of the body's resistance.

The courses to be offered in gynecology, genito-urinary diseases, rhinology, otology and laryngology, ophthalmology and dermatology and syphilology will consist of two two-hour periods per week. Both hospital and dispensary clinical material will be available for these courses.

For the benefit of physicians who are able to give full time to the work, an effort will be made to arrange the schedule so as to permit the taking of as many courses as possible.

Since the number of students enrolling in these courses must necessarily be limited, and also that the giving of the various courses is dependent upon the number of applicants for each course, it is urged that those desiring to take the courses apply at once to the Registrar,

Indiana University School of Medicine, Indianapolis, for registration card, indicating the courses desired.

For further information address Registrar, Indiana University School of Medicine, Indianapolis.

DISCRIMINATION AGAINST AMERICAN PHYSICIANS IN VIENNA

If anyone believes that the Germans are not treasuring a grudge against Americans, all he has to do is to read the statement issued by the officers of the American Medical Association at Vienna to American physicians who are thinking of taking postgraduate work in Vienna. This statement, which is duly signed by the officers, is as follows:

VIENNA, March 24, 1922.

TO AMERICAN PHYSICIANS:

The American Medical Association of Vienna was established 1904.

The objects of the Society are to promote the social intercourse and the scientific advancement of its members, to provide information in regard to the scope and relative value of courses, and to furnish data for the rapid orientation of new members in regard to pensions, rooms, restaurants, etc. (Article II. of the Association's Constitution).

It also regulated, in agreement with the teachers, the different fees charged for post-graduate work, and arranged all the courses taken by American doctors. It worked to the satisfaction of both the American doctors who came to Vienna for post-graduate study as well as for the teachers of the Vienna University. A great many courses were placed under the control of the A. M. A. of Vienna, as far as their personnel, number of members, and hours were concerned. These were called bookcourses and were given for a fee approved of by the Society. The so-called "Blue Book" comprised all these courses and explained how they were conducted. The Blue Book was issued every year on January 1st, and the members of the A. M. A. of Vienna as well as the teachers abided by its rules. It was not only the quality of the teachers but also the propaganda which the members of the A. M. A. carried on in the States that made Vienna the hospitable home of 300—400 American doctors every year. Things ran smoothly most of the time up to 1914 when the war broke out. During the war, Dr. J. Lange, a former president of the A. M. A. of Vienna, remained in Vienna and had the misfortune of breaking down physically as well as financially. The lecturers in recognition of his services and probably also in expectation of Dr. Lange's sending back 150 American physicians to Vienna, as he promised, made up a purse with which to send him home to Chicago. They also defrayed the expenses of a Blue Book, which he had compiled without any authority whatever from the A. M. A., and in which he printed exorbitant fees for the courses to be given by the various lecturers. This is the Blue Book of 1919.

These preliminary remarks, we find necessary for the full understanding of our present unfortunate difficulties with the Vienna Faculty concerning fees charged for courses.

In the summer of 1921 about 12 American physicians came to Vienna to take courses, and first began to complain about the fees they were asked to pay. They were charged all the way from one to ten dollars for one hour.

The discrimination which was going on against American physicians became unbearable, for it was a twofold discrimination. To understand this, you must know that two sorts of courses were being given at the clinics.

1. Courses read in German and accessible to doctors from any part of the world. For these courses, the lecturers charged the Austrian physicians about one-fifth of what they charged physicians coming from the newly formed republics of dismembered Austria. Such physicians were called (Neu-Auslander) "new" foreigners. Doctors, however, who came from countries like France, Switzerland, Holland, England, etc., were called (Alt-Auslander) "old time" foreigners, and they were charged ten times as much as the Austrian physicians who happened to take the same course.

Our men, as long as they were not asked to pay more than the so-called "old" foreigners, never refused to pay ten times more than the Austrian doctors. But they did refuse to pay more than the "old" foreigners (Swiss, Dutch, Italian, French, etc.). They could not understand why they should be considered better off financially than the Swiss or Dutch for instance because the franc and Dutch guldin increased in value in the same ratio as the dollar.

2. The other possibility open for the American doctors to take courses was for them to club together, but since there were often only a few Americans present such courses would seldom comprise more than two to four members. When the teachers were engaged, the Americans were charged three, four, five or even twelve dollars per hour, regardless of whether the course was given in German or English. That means the teacher got for his working hour, if he happened to work for American doctors, three to twelve dollars, which in Austrian crowns in August, 1921, amounted to 3000—12000 crowns. This same teacher, teaching the very same subject, would sell his hour, according to the printed official program for post-graduate work issued by the Vienna Medical Faculty, for 2500 crowns to any other foreigner, and 250 crowns, at the most, to an Austrian. It was, therefore, evident that, no matter whether the American physicians took courses jointly with physicians of other nations or had them arranged for themselves only, they were unjustly discriminated against.

Under such conditions it was but natural that the former American Medical Association was reorganized, and a president elected who, owing to his Vienna origin, was thought to be capable of adjusting the matter. The president had a committee work with him and after August 28th many joint meetings were held with the representatives of the teaching body of the University. In these meetings, the unjustified and unfair attitude displayed toward the American physicians was thoroughly discussed. The committee brought detailed charges of conspicuous discrimination against American doctors. On Nov. 19th the American physicians offered a maximum fee of three dollars for the teacher's hour, proving absolutely that three dollars was 4 to 10 times more than any other foreigner was asked to pay for the same course by the same teacher. The committee also proved, in a detailed memorandum submitted to the teaching body Nov. 19th, 1921, that three dollars per hour in Vienna was a great deal more than ten dollars paid to the best teacher in post-graduate work in New York. It was proved that the Viennese teacher could buy more for three dollars in Vienna than the American teacher could for ten dollars in New York. It was further shown that, if the terms as proposed by the A. M. A. of Vienna were accepted by the medical teaching staff, many more

American doctors would be induced to come to Vienna for post-graduate work, and would thereby re-establish the highly satisfactory pre-war organization.

After prolonged debate and negotiations the terms were acceptable to all departments with the exception of eye, ear, and skin (Clinics Meller, Neumann, Dimmer, Finger, Riehl). Without the cooperation of these clinics, however, a satisfactory organization would be impossible, for 75 percent of the American doctors are directly concerned with these departments.

Since our many attempts to reconcile the relationship between the docents and the A. M. A. of Vienna have been unsuccessful in procuring a definite agreement, we feel it our duty to let medical men in the United States know what sort of discrimination is taking place against American physicians.

We have requested the U. S. A. Legation in Vienna to intercede and endeavor to change this lamentable state of affairs, but we have little hope of any success in this matter.

P. S.:—We shall ask the *Journal of the A. M. A.* in America to print this statement to correct the impression conveyed in the letter written by Dr. G. H. Kress of Los Angeles, Cal., which appeared in its Correspondence Column Dec. 31th, 1921. Dr. Kress on leaving Vienna was in full knowledge of the condition described above—in fact he was the author of the memorandum presented to the teaching body of the University of Vienna on Nov. 19th, 1921, enumerating all the facts given above—but we surmise that Dr. Kress on leaving Vienna had hoped that the teaching body of the University of Vienna would surely not turn a deaf ear to the just complaints of the American physicians.

A FEW ILLUSTRATIONS OF DISCRIMINATION

In the official program of the Viennese Medical Faculty for post-graduate courses to be given October, November and December, 1921:

Docent Elias announces a course for metabolic disorders; fee 500 crowns per hour of his time (if taken by Austrians); the same course he offered to the A. M. A. for five dollars per hour, or according to the exchange value of the dollar at that time 40,000 crowns per hour!

Docent Stein announces a course for skin diseases and cosmetics; fee 400 K per hour of his time (if taken by Austrians); the same course he offered the A. M. A. for five dollars per hour = 40,000 K per hour from Americans!

Docent Denk announces: "Selected Chapters from Special Surgery" for 250 K per hour of his time (if taken by Austrians); from the A. M. A. he asks five dollars per hour of his time = 40,000 K!

In January and February, 1922, when the dollar went up to 9—10,000 K in exchange:

Docent Hirsch asked in his course, "Anatomy and Pathology of Nose and Sinuses," from old foreigners 6000 K for one hour of his teaching time, from Americans four dollars = 36—40,000 K.

Prof. Kyrle, in a skin course given in February to 2 Swiss, 1 Egyptian and 3 Americans, asked 30,000 K from the Swiss and Egyptian and 60,000 K from the Americans—and they paid it!

Sincerely,

P. S. GRAVEN,
W. G. SAHR,
F. F. SCHMIDT,
JOHN PENNINGTON,
T. L. BLANCHARD.

DETROIT APPEARANCE OF LORENZ, WEDL & CO.

Now that the curtain is about to go down on the Lorenz vaudeville show in Detroit, the blessings bestowed on our cripples by our distinguished Austrian visitor may be appraised with some regard for the actual facts, and with some hope of enlisting popular interest therein.

Dr. Lorenz has not performed a single operation, public or private, that could not be as well done by five of Detroit's orthopedic surgeons. In the course of the day's work these Detroiters do everything that Lorenz can do.

Dr. Lorenz's widely advertised Lolita Armour case in Chicago involved precisely the same operation that had previously been performed by a Detroit surgeon who is still in practice.

Dr. Lorenz's reputation for his treatment of congenital hip trouble, as first revealed by an Italian doctor, was well deserved in its day; but there are men in Detroit, and all over America, who are quite as adept in administering the same treatment now. Chicago surgeons report that of 26 dislocated hips operated on by Dr. Lorenz on his last visit to America, only two had been successfully reduced.

Dr. Lorenz limited his free clinics in Detroit to the simpler cases, including those that appear spectacular, thus reserving more difficult cases for private inspection, provided the patient was able to pay his fee.

Dr. Lorenz collected $100 in advance from every private patient he saw in New York, whether he could do anything for the patient or not. He told a New York newspaper that his "receipts of a single day were never as much as $3,000". His Detroit fee for private patients has been reported at $50 and upward, according to the patient's purse.

Dr. Lorenz's operations depend for their success, as do all such operations, not on the skill of the operator alone, but on subsequent treatment, which must continue for two years on the average in orthopedic cases. Some of our own orthopedic surgeons refuse to operate on patients outside their own city rather than risk the failure of subsequent treatment.

Dr. Lorenz has not done anything for charity in the treatment of Detroit's cripples that is not done every week by Detroit's orthopedic surgeons, and every year by other orthopedic specialists whom they bring here for open clinics.

Dr. Lorenz was brought to America by Anton Wedl, a New York lace importer, and another New York business man whom Mr. Wedl does not name. Dr. Lorenz says he came to repay Austria's debt for America's care of Austrian children. Wedl handles all the money Dr. Lorenz collects.

If that money goes to the relief of Austrian children, as has been assumed by some, Dr.

Lorenz and his financiers are not repaying their debt to America, but increasing their obligations.

If it goes into the pockets of Lorenz, Wedl & Co., America will occupy a high place on the sucker list of a professional gentleman engaged in feathering his own nest in the name of philanthropy. That may possibly explain why Dr. Lorenz and his colleagues neglected so many American prisoners in Austrian camps and turned them out with deformities instead of sound limbs.

At any rate, taking up a collection has proved to be an essential part of the Lorenz program in Detroit and elsewhere. He does not even stop at attaching his name to an advertisement for corsets.

Scientifically speaking, the difference between Dr. Lorenz and our own orthopedics is a difference in stage effects dramatically and freely furnished our distinguished Austrian visitor by susceptible newspapers.—Editorial *Detroit Saturday Night. Journal Michigan State Medical Society.*

LESSONS FROM LORENZ

Before Dr. Lorenz visited Detroit, prominent medical men throughout Michigan were seeking some means of securing legitimate publicity on medical affairs without violating the ethics of their profession. Their problem was to offset the commercial advertising of the quacks by carrying medical truth to the public without commercializing their profession by buying advertising themselves.

The need of the medical profession for legitimate publicity, and the value of it to the public, were impressively demonstrated by the results of the free publicity accorded Dr. Lorenz in American newspapers. Many intelligent people had never heard of the possibilities in orthopedic surgery until Dr. Lorenz appropriated a large percentage of the newspaper headlines. Comparatively few people knew that there were orthopedic surgeons in Detroit and other American cities quite as skillful as Dr. Lorenz, or that these surgeons were doing their full share of free clinical work.

Popular interest in Dr. Lorenz has a broad educational value, and will continue to have during the months that his patients must rely on local practitioners for treatment. Dr. Lorenz himself recognizes "amazing skill among physicians" in Detroit. Dr. Kidner of Receiving Hospital announces after x-ray examination that Dr. Lorenz did not effect a complete cure in any of his operations at that institution, and a more notable fact is that the cases Dr. Lorenz selected for operation were among the simplest. Nevertheless, the staging of the Lorenz operations in such a dramatic way as the newspapers have done it has produced a sort of revival in orthopedic surgery in Detroit and elsewhere.

Yet Dr. Lorenz's specialty involves only one branch of medical practice. There are many others that the public knows as little about. How many people realize, for instance, that it is a common thing for our oculists to straighten cross-eyes? Publicity will tell them; and the kind of publicity devised by the Michigan medical organizations and the University of Michigan for dissemination through the lecture platform and the News Radio Station will be welcomed by unfortunate people in search of health and strength. And it ought to be an effective answer to quackery.—Editorial *Detroit Saturday Night. Journal of the Michigan State Medical Society.*

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

To use a slang phrase, doctors are overlooking some good bets when they fail to read the advertising in medical journals, and we especially call attention to our own advertising pages where announcements of interest to many members of the medical profession will be found. Not infrequently some rather rare bargains in supplies are advertised.

GOVERNMENT reports continue to extol the virtues of carbon tetrachloride as an effective agent in the treatment of hookworm in human beings. It was first used as an efficient remedy for hookworm and related blood sucking worms in animals, and it is only within the last few months that it has been found to be equally efficient in the treatment of hookworm in the human. Fortunately the treatment is unattended with danger, and it is extremely cheap, the chemical being one that is commonly used for cleaning clothing.

IT may be of some interest to the readers of this Journal, especially those interested in

radium, to know that recently Dr. Albert M. Cole and Dr. Raymond C. Beeler have lost, through theft, fifty-five milligrams of radium. This was contained in four needles and one five milligram plaque. The radium was taken from a combination safe, the thief working the combination successfully. Fifty milligrams in two tubes in an applicator was overlooked by the thief, probably establishing his ignorance of radium. It is possible that this thief with a radium burn may come under the notice of some physician with this information in mind.

THAT microbes harbored by rats can induce jaundice in human beings was convincingly demonstrated for the first time recently when a young woman bacteriologist in the State Health Department Laboratories at Albany, New York, became infected by accidentally pricking her finger with the needle of a syringe containing a virulent culture of the leptospira from a rat which had been prepared for the inoculation of a rabbit. Now that it has been definitely proven that rats harbor a germ which will infect human beings, an immediate and relentless war on these rodents should be instituted.

A FORT WAYNE woman has sued a shoe store for five thousand dollars damages because a pair of shoes which she purchased of them had paper heels which suddenly gave way while she was wearing the shoes and precipitated her to the ground with more or less serious injury. So far as we know this is the first case of the kind on record, and while it probably will fail in its purpose, yet it shows the length to which people will go in an attempt to secure something unfairly, though it may be that the matter has been stirred up by a shyster lawyer. It really reminds us of some of the suits for malpractice sometimes brought against physicians without justifiable cause.

RADIUM owners will be interested in a new radium insurance policy which has recently been offered for sale by the Insurance Company of North America. Lloyds of London, who previously handled the major part of the radium insurance, recently raised the annual premium rate to 5 percent. This action met with universal disapproval, and a number of interested Philadelphia physicians set about to secure a radium policy that would give owners protection under all reasonable conditions. The result is this new policy offered by the above mentioned firm, which covers all risk, at a premium of 2 percent per year, but with the payment of but 75 percent of the loss instead of 100 percent.

IN an address delivered before the meeting of the secretaries of state medical associations, Dr. Alexander R. Craig, secretary of the American Medical Association, made a very important suggestion when he said "the council of the State Medical Association should not only serve as a court, but it should also be in fact the active agent for guiding the organization within the State. The councilors personally should visit, correspond with, and through other means supervise and stimulate the activities of the county medical societies". To do this work effectively will entail considerable thought and effort, but if the best results are to be obtained the councilors must be diligent and active in the performance of the duties of their offices.

THE chiropractors and all other pseudo-medical cults are opposing all forms of legislation that have the remotest effect upon the legitimate practice of medicine. They give their support only to such legislation as throws open the doors for all kinds of chicanery and quackery in the practice of the healing art. With true consistency they are opposing Senate Bill No. 2764, introduced by Senator Watson of Indiana, which provides for the transferring of some of the medical officers in the reserve corps to the regular Public Health Service and thus makes for more efficient service through the increase in the number of permanent officers. We shall be interested in knowing just how great the influence of the pseudo-medical cults will be in defeating this very wise bill.

THAT Indiana is waking up to the dangers of some of the medical uplift schemes proposed by erstwhile reformers is evidenced by the fact that the Indianapolis Medical Society, the largest local medical society in the state, has adopted a set of resolutions covering opposition to various forms of medical practice which are paternalistic in character or tend toward State Medicine. The resolutions are published under Society Proceedings in this number of THE JOURNAL and are worth reading by every medical man in Indiana. We hope that this step by the most prominent local medical society in Indiana will result not only in serious consideration of some of the evils that confront us, but actual opposition to those enterprises that have as their ultimate end competition with private practitioners and finally the practical abolition of the private practice of medicine.

Now that protection against diphtheria for years and perhaps for life can be obtained by the injection of toxin-antitoxin, much as we protect against smallpox by vaccination, we wonder if the Anti-Vaccination Society will not add to their propaganda a fight against the

newer protective measure. Just why there should be such strenuous opposition to tried and tested methods of preventing such terrible diseases as diphtheria and smallpox is hard to understand. Even by the wildest stretch of imagination the effects of the remedy are less than the effects of the disease, and, except in very rare instances and those usually due to faulty technic or to some coincident cause, no ill effects have been produced by these protective measures. Therefore, opposition to them must be a question of bias based upon ignorance, or, perhaps we might say, pure obstinacy for the joy that is in it.

TYPHOID fever in Indiana has been steadily reduced from 21.2 percent in 1916 to 9.7 percent in 1920 per one hundred thousand population. However, this rate is altogether too high, and there is no reason why it should not be reduced to meet Massachusetts and Wisconsin, which have the lowest typhoid death rate. The amount of typhoid fever in the community is recognized as one of the indexes of its healthfulness, and it also indicates the condition of sanitation. There is no reason why Indiana should be behind a large number of populous states like California, Connecticut, Illinois, Michigan, Massachusetts, Minnesota, New Jersey, Ohio, Wisconsin and a few others which apparently pay more attention to sanitation than we do. This is a subject worthy of the attention of our State Board of Health, with the suggestion that more attention be given to the enforcing of sanitary regulations with special references to health officers in small towns and rural communities.

DOCTORS are interested in good roads and they should use their influence in helping our road commissioners in securing federal and state appropriations from funds now available. We call attention to this matter for the reason that it was reported that in some districts in Indiana it would be possible to build roads without a cent of expense to the people in the vicinity in view of the federal and state funds that are available for the purpose, and yet the residents of these communities are showing absolutely no interest in the matter. In one or two instances the State Highway Commission has even pointed out to some of the prominent residents of certain districts where good roads are needed that an effort should be made to obtain roads that could be secured with little or no local expense. Certainly the doctors who are using roads constantly ought to take some interest in the matter. One of the ways in which this can be done is by joining the Hoosier Motor Club.

THE Harmer Laboratories Company has been scattering broadcast to the medical profession of Indiana literature on Mon-Arsone, "a new and non-toxic arsenical for the treatment of syphilis". The literature states further that with this drug "the toxic, corrosive and uncertain reactions attending the use of arsphenamine have been entirely eliminated" and that "it has a therapeutic value equal to arsphenamine, but extensive case reports fail to record the slightest toxic reaction following its use". Extensive experimental work carried on under the direction of the Council on Pharmacy and Chemistry of the American Medical Association has brought forth the report that the claim that Mon-Arsone has a therapeutic value equal to that of arsphenamine is premature and unwarranted; that Mon-Arsone should not be used except under conditions that justify the experimental trial of an unproved drug; and that the advertising propaganda for the drug by the Harmer Laboratories Company is to be deprecated.

THE high cost of publication is driving many medical journals out of existence either through complete suspension or amalgamation with other journals. Even the old independent medical weeklies are disappearing, and the last of them, the *New York Medical Record,* has been combined with the *New York Medical Journal,* which appears semimonthly. On the other hand, the greatest medical periodical of them all, the *Journal of the American Medical Association,* continues as a weekly and constantly grows in importance, not only from the fact that it goes to such a large number of readers through membership in the A. M. A., but because of its high ethical and scientific standards. It also is true that the State Journals for the most part are growing in popularity and importance, for with few exceptions they are run on a high ethical plane and aim to represent the interests of and to be of real practical value to the readers. There is no longer any room for the purely commercial medical journal and we are thankful that they are passing out of existence.

THE country seems to have gone crazy over results secured from radio phones, and receiving sets are being put into commercial houses and private homes with a rapidity that taxes the manufacturers. The more powerful receiving sets, when properly installed, permit an audience of several people to sit in a room and hear lectures or concerts at sending stations a thousand or more miles away. At present the expense of producing these programs is an advertising venture for various concerns, and eventually when the novelty wears off or through lack of appropriate return on the investment,

these programs will not be given as they are now, subject to the enjoyment of any and all who own receiving sets and without expense. While the present craze lasts there is a wonderful opportunity to educate a large portion of the public in public health matters and we are glad that the New York State Department of Health is taking advantage of the opportunity by giving short public health talks. These talks should be not only pertinent but short and to the point. They should be of practical value in giving information to the public which will aid in the prevention of disease and the preservation of health.

OFFICERS of our county as well as state medical association should set a good example so far as the ethics of the profession are concerned. That their actions are not above criticism is evidenced by numerous newspaper clippings received at this office from various parts of the state which give glowing accounts of operations or other professional attention rendered patients by this or that doctor—full names being given. Usually such newspaper clippings are sent in with such notations as "and this man is the president"—or secretary, as the case may be—"of our county medical society". As we have stated more than once, whenever you repeatedly see a doctor's name in one of his home papers in connection with some wonderful operation or other startling professional services rendered, you can make up your mind that that doctor has courted the publicity given if he has not actually asked for it. Any reporter or editor will respect the wishes of any doctor who requests that his name be omitted in connection with newspaper publicity, and there is absolutely no excuse for repeated violation of this phase of medical ethics.

IF Secretary Combs had any doubt about the county secretaries reading the membership statistics in THE JOURNAL, it was dispelled when a letter was received from Dr. Dugdale, secretary of the St. Joseph County Medical Society. In the April number of THE JOURNAL a list was published of the largest county societies in the state, and, through the State Secretary's error, St. Joseph County was not listed in its rightful position. However, during the month of April, since that report was published, St. Joseph County has sent in enough additional memberships to step them up in the column until now they are in third place. In fact, Dr. Dugdale was the first secretary this year to send in the dues of all of last year's members. It is perhaps a commentary on the recent migration of physicians to note that the larger societies, Marion County, Vigo County, St. Joseph County and Vanderburg County, have the largest memberships in the history of their respective organizations. It is the less populous counties that have lost some of the few doctors they used to have, and the presumption is that these doctors have moved to the larger cities.

THE legislative committee of the State Association may well consider the advisability of having a paid representative to look after legislative interests in Indiana as they affect the medical profession. The results of the recent primaries indicate the necessity of doing political work prior to the convening of the legislature. We might just as well face the fact that we must indulge in politics if we are going to get anywhere, and act accordingly. Too long have we depended upon intelligence and consistency in the framing and enactment of laws that directly or indirectly affect medical practice, only to discover that the average legislator is not guided by sense or reason but by political influence, and to get under the skin of that type of legislator means that we must take a hand in molding political influence. We can't do this by pursuing an apathetic course until the legislature convenes and then frantically work to head off iniquitous medical legislation that should have been prevented by earlier and more effective action. We may continue to consider it distasteful to enter into politics, but we are not going to make any real progress or even protect the interests of the medical profession until we do engage in politics, and we might as well begin at this late date. One way to do this is to have paid representatives who at all times will be "on the job".

AGAIN we desire to call the attention of medical men to the propriety of investigating before paying good money for securities of any kind. Our reasons for doing this are two-fold: First, generally speaking, doctors are poor business men, and the most gullible on earth when it comes to making investments; and, second, right at the present time the doctors in Indiana are being solicited to buy stocks and bonds in an enterprise of questionable value, and to further the sale of these securities among members of the medical profession the solicitors are showing letters of endorsement from several physicians of high standing. No matter what the claims of solicitors may be, nor how glowing the prospectus report may show up financial conditions, it is a wise plan to thoroughly investigate any proposition before investing your hard earned money in it. This means the securing of a statement of assets and liabilities, which statement should be analyzed carefully and proven to be satisfactory from an investment standpoint. Any conservative banker or the bond department of any of our well-estab-

lished banks will determine the safety of any contemplated investment, and if doctors more often would take advice from such sources, and not "fall" for the glib talk of a stock salesman or promoter, they would lose less than they do now from bad investments.

THE American Relief Administration in Russia undoubtedly is doing a wonderful work in relieving distress in that misguided and poverty stricken country. The twenty million dollars appropriated by Congress, and still other means that have been contributed by charitable persons in America, have gone a long way toward relieving the famine infected districts and preventing starvation of hundreds of thousands of peasants, and especially peasant children who suffered most. However, one cannot help feeling a little antagonistic to this relief project in view of the fact that many of those who accept our aid will at the first favorable opportunity turn upon us. Perhaps the bolshevistic leaders already are chuckling to themselves because we have, in a measure, aided their cause. Of especial interest to the medical profession has been the work done by the relief administration in equipping the hospitals with new instruments, medical supplies and surgical dressings so badly needed. In addition to this, daily food rations to the hospital patients and to undernourished children are being furnished without stint. A need that was taken care of to the great relief of sufferers was the furnishing of ether and chloroform for anesthesia. Previous to the furnishing of this relief, each person coming to the hospital for an operation was asked to bring his own anesthetic, but this rule availed nothing, as anesthetics were unobtainable or, in rare instances, at prohibitive prices. Therefore, it became necessary to perform minor operations without administering an anesthetic, and even amputations were performed in that manner, not even the sedative influence of opium being at hand. This work is truly a work of charity, and let us hope that the gratitude shown at the present time may be felt for years to come.

A CHIROPRACTOR has written us relative to our criticism concerning the cult and very pertinently remarks: "If it is wrong to practice chiropractic, why are the states continuing to grant charters for the establishment of chiropractic schools and colleges?" He then goes on to say that perhaps we would accomplish more by preventing the chartering of these establishments than by attacking those who are practicing under the charters that have been granted. We admit that there is some truth in the logic, but desire to point out that a charter merely grants permission to do certain things, and does not prevent the enterprise so chartered from doing some things that are in direct violation of laws which have no bearing upon the charters. For instance, a charter may be granted for the teaching of chiropractic, but the actual practice of chiropractic comes under quite another law which prescribes the qualifications of any who practice the healing art. The whole trouble with the chiropractic situation is that the law covering the practice of the healing art is not enforced. We have enough laws but they are not worth the paper they are written on unless enforced. If all of the states in the union had possessed Boards of Medical Examination and Registration with a particle of backbone, and had enforced the existing medical practice acts, we wouldn't hear a word about chiropractors or any other pseudo-medical cults. In the State of Indiana we had an inefficient and spineless Board of Medical Registration and Examination for a great many years. That Board prosecuted and persecuted a lot of graduates of regular medicine because through some technicality or other those medical men were unable to comply with the provisions of the medical practice act. At the same time the Board permitted quacks and members of the pseudo-medical cults to escape, and in consequence we at present have the state overrun with a lot of incompetents who should have been prosecuted for practicing the healing art unless they complied with the laws of the state. Now the number of such offenders is so great that prosecution seems futile, and yet every mother's son of them are law breakers, to say nothing of being incompetents and dangerous to the welfare of the community. The chiropractic teaching is irrational, inconsistent, and based upon the grossest ignorance. Our state laws are for the protection of the people and specify educational requirements that should be exacted of everyone who desires to practice the healing art. The law is eminently fair and makes no discrimination in the schools of medicine when it demands that all shall have the same educational requirements. When it comes to the application of treatment, nothing is offered in objection to any plan of treatment which the licensed practitioner may desire to employ. The law as it exists should be upheld, and the reason it is not upheld is through the laxness of our medical boards, and the apathy of the medical profession in engaging in any sort of legislation which while protecting the public probably would be considered as inaugurated through selfish motives. Probably in time the public will realize the injustice of the whole situation as it pertains to the deification of ignorance, and restrictive legislation will be enforced. In the meantime it is not necessary to attack the charters of chiropractic institutions, for chiropractic schools can, and do, operate without charters.

OUR editorial in the April number of THE JOURNAL concerning the imposition of insurance companies in general, and the Lincoln National Life in particular, upon the medical profession, has brought forth a number of interesting communications. One communication, giving a series of letters which passed between an Indiana physician and the above mentioned insurance company following the presentation of a bill for service rendered in filling out one of their regular questionnaires, is of sufficient interest and importance to merit the attention of medical men in general. We are publishing the correspondence herewith:

FIRST LETTER

Fort Wayne, Indiana, April 10, 1922.

DR. —. —. ————.
————, ————.

Dear Doctor:

We are in receipt of your statement for $———— for furnishing this Company with information on ————, a patient of yours, who has applied to us for insurance.

We have always felt (possibly we are in error) that a physician's professional responsibility toward his patient does not end entirely with the mere completion of the treatment he was to have, but we have felt that the duty still remained with the doctor to impart information regarding this treatment when such information would not have a derogatory effect but would perform a distinct service. For instance, in the case of Miss ————, we would not have been justified in issuing a policy without knowing that there was not a more sinister aspect to the condition for which you treated her than was set forth in her statement and without that information we would have been unable to perform what we are pleased to call a distinct service in giving her protection.

The Mayo Clinic, at Rochester, Minn., Dr. G. W. Crile, of Cleveland, Doctors Thayer and Barker of Johns-Hopkins Hospital, and numerous others are continually filling out our blanks because they believe in insurance and know that they are assisting their former patients who are deserving of protection and are also serving a public welfare institution, which life insurance undoubtedly is.

As this information is always furnished us without charge, it has occurred to us that you do not fully understand, or have not considered, the exact significance of this information.

While the facts which you have given us have been an accommodation to the Company, yet by giving them to us you have more directly favored your patients by assisting them in obtaining the insurance which they desired. Physicians have always been glad to cooperate in this manner, and we believe that after regarding the matter from this point of view, you also will be glad to be numbered among those physicians with whom we have had similar dealings.

LINCOLN NATIONAL LIFE INS. CO.

REPLY

S—— B———, Indiana, April 14, 1922.

GENTLEMEN:

I am in receipt of your letter in reply to my statement for service rendered in the case of Miss ———.

As to a physician's professional responsibility toward his patients—the practice of medicine, like selling life insurance, is a matter of business. This applicant has received value in full for such fees as paid for service I have heretofore rendered, a just fee, commensurate with my knowledge of what it costs me to operate my business, has been charged. Your Company is in business primarily to earn dividends and you base your premium rate on what experience has shown to be adequate to meet losses, pay necessary expenses and earn a return on money invested. Your interest in your applicant ceases after you have paid his, or her, death loss, for you deem such payment consummates your obligation, and also when the applicant chooses to quit paying premiums.

If the service I have rendered you concerning this patient was given for any humanitarian reason it might be granted gratuitously; but it is not, it is to protect your Company's business.

You grant in your communication that the facts in this case as furnished have been an accommodation. I go further and state that they are a distinct business asset and as such are valuable to you or you would not seek such facts and opinions.

Now as to the attitude of various other physicians, it interests me not. Many physicians choose to go out as medical missionaries without hope of reward or compensation.

Your classifying an insurance company as a public welfare institution is a little far-fetched. They are distinctly operated for profit and have no harbor for the deserving poor or destitute.

I, like many other physicians, do a certain amount of business for which I receive no remuneration, some of it we class as charity; but when I render service to those who are able to pay I feel that it is their duty to do so. A statement of fee commensurate with service has been rendered in this particular case.

Very truly yours,

—. —. ————.

INSURANCE COMPANY'S REPLY

Fort Wayne, Indiana.

DEAR SIR:

In view of your letter of April 14, we are inclosing herewith Company's check for $———— in payment of your service in connection with the case of ———.

Very truly yours,

LINCOLN NATIONAL LIFE INS. CO.

DEATHS

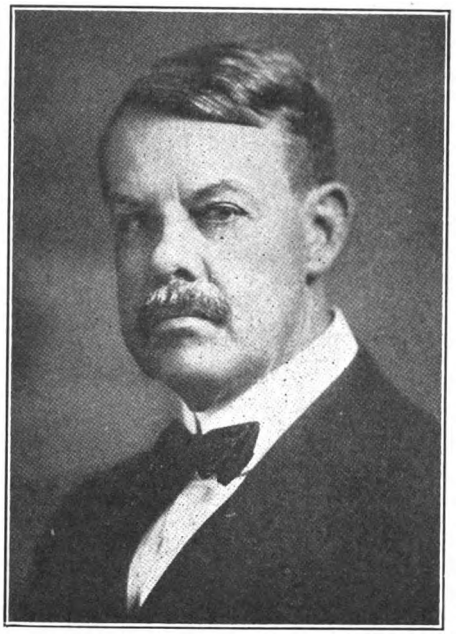
EDWIN WALKER, M.D., of Evansville, who died April 23, 1922, had been in declining health for the past five years, due to a spinal disease which a laminectomy disclosed to be round-celled carcinoma.

Dr. Walker was born at Evansville, Indiana, in 1853, being sixty-eight years old at the time of his death, and was the son of James T. and Charlotte Walker. He was married to Miss Capitola Hudspeth of Evansville, who survives him. No children were born to Dr. and Mrs. Walker.

His early education was obtained at the Evansville public schools, and later he graduated from Hanover College, from which school he received the degree of Ph.D. He then began the study of medicine, graduating when he was but twenty years of age from the Evansville Medical College in 1874. He also graduated from the New York University Medical College in 1879. Shortly after his graduation in medicine he was made demonstrator of anatomy and

subsequently professor of anatomy in the Evansville Medical College. Later he also held the chair of Diseases of Women, and at one time the chair of Diseases of the Nervous System.

Dr. Walker was a constant student and had made several trips to Europe, on one of which he spent two years in postgraduate work. He was an active worker in medical societies, and has contributed much to the medical literature of his state. He had been first vice-president



Dr. Edwin Walker

of the American Medical Association, president of the Mississippi Valley Medical Association, president of the Indiana State Medical Association (at the time of his election being the youngest physician who had ever held the latter office), and was a member of the first Board of Councilors under the present organization of the society, which position he held for a number of years. He was interested and active in all that pertained to the interests of the medical profession. He was, until the beginning of his present illness, one of the leading abdominal surgeons in Indiana, and his experience and skill were reflected in his papers and discussions in the numerous medical associations to which he belonged. He had an unusual charm of manner and felicity of expression, and was especially well known in the American Medical and Indiana State Medical Associations, in both of which he had an active and sincere interest. Upon the reorganization of the American Medical Association he was a member of the first House of Delegates, and represented the Indiana State Medical Association in that capacity for several years.

Dr. Walker also was interested in civic affairs, and for the past twenty years had been president of the Associated Charities of Evansville. At one time, for four years, he served as a member of the City Council and president of the City Board of Health. He formerly was a member of the board of trustees of the Medical College of Indiana.

Dr. Walker engaged in general practice for several years, afterwards giving his chief attention to surgery, and in 1894, in association with the late Dr. A. M. Owen, he established the Walker Hospital. This hospital has been for many years, and still is, the largest and most successful private hospital in Indiana, and since his illness has been conducted by his staff of nine associates.

As stated editorially by the *Evansville Courier*, if ever a man ennobled a noble art, Dr. Edwin Walker surely graced and adorned his profession. It is given to but few of us to reach the height in his chosen life work that Dr. Walker achieved; it is given to fewer of us to reach the pinnacle and leave only admirers upon the plains beneath—yet that dual achievement may be writ to his everlasting credit. An honored memory is a wonderful heritage, and Dr. Walker's life and work will live on and be an inspiration to those whose privilege it was to know him.

THOMAS A. SHANE, M.D., of Columbus, died April 14 at the age of eighty-two years. Dr. Shane graduated from the Pulte Medical College, Cincinnati, in 1881.

JOHN S. HOLLINGSWORTH, M.D., of Indianapolis, died April 8 at the St. Francis Hospital as the result of an automobile accident. Dr. Hollingsworth was fifty-seven years of age. He graduated from the Medical College of Indiana, Indianapolis, in 1893.

GEORGE A. STEVENSON, M.D., of Rising Sun, died March 30 at the age of eighty-four years. Dr. Stevenson graduated from the Rush Medical College, Chicago, in 1865, and was a member of the Ohio County Medical Society, the Indiana State Medical Association and the American Medical Asociation.

ELIHU P. WASHBURN, M.D., died at his home in Buffalo, Indiana, April 1. Dr. Washburn was eighty years of age and was a graduate of the Medical College of Indiana, Indianapolis. He was a member of the Jay County Medical

Society, the Indiana State Medical Association and the American Medical Association.

MILLARD F. BRACKNEY, M.D., of Mooresville, died April 20 as the result of complications of diseases contracted while in the army. Dr. Brackney graduated from the Medical College of Indiana, Indianapolis, in 1890, and was a member of the Morgan County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

THE Benton County Medical Society held its regular monthly meeting at Oxford, March 29.

DR. O. T. BRAZELTON, of Princeton, has been appointed county health officer for Gibson county.

THE Northern Tri-State Medical Association held its forty-ninth annual meeting at Ann Arbor, Michigan, April 11.

THE Howard County Medical Society held its meeting at Kokomo, April 7. A paper was presented by Dr. George D. Marshall.

DR. L. D. GOODWIN has moved to Francisco from Winslow. He will take up the practice of medicine in Francisco.

THE Sullivan County Medical Society held a meeting at Sullivan, April 12. A paper was presented by Dr. V. A. Funk, of Vincennes.

AN electric diet kitchen is being installed in the Indianapolis Orphan Asylum, the gift of Mrs. Bernard Vonnegut.

DR. CHARLES S. WOODS has resigned as superintendent of the Methodist Hospital, Indianapolis.

DR. E. E. HODGIN, president of the Board of Public Health of Indianapolis, has announced that seven internes will be added to the present number (seventeen) at the City Hospital.

DR. W. A. HOLLIS, of Hartford City, has returned from Chicago, where he took some special work on the eye under Professor Fuchs, of Vienna.

DR. BYRON E. BIGGS has been appointed superintendent of the Indiana State School for Feeble-Minded Youth at Fort Wayne by Governor McCray.

DR. F. E. HAGIE, of Richmond, has been appointed surgeon for the Pennsylvania Railroad Company to succeed the late Dr. Charles Marvel.

THE Clinton County Medical Society held its regular meeting at Frankfort, April 6. Dr. L. L. Harding, of Frankfort, presented a paper on "Hyper-Thyroidism".

DR. HERBERT A. RAY, of Fort Wayne, has been selected by the S. F. Bowser Company to fill the place of company physician. He succeeds the late Dr. E. E. Morgan.

DR. W. C. REED, of Bloomington, has been made assistant to Dr. J. E. P. Holland, Indiana University physician. Dr. Reed succeeds Dr. Fernande Hachat Luck.

THE Tippecanoe County Medical Society held its monthly meeting at Lafayette, March 28. A paper on "Some Aspects of Malocclusion" was presented by Dr. Paul A. Risk.

AT the request of a delegation of colored men from Marion County, adequate provision has been made in the county tuberculosis hospital at Sunnyside for the care of negro patients.

AN amputating case, purchased in 1840 and used during the Civil War by the late Dr. Albert G. Preston, has been placed in the state museum at Indianapolis.

THE Huntington County Medical Society held its regular meeting April 4 at Huntington. A paper on "Uremic Poisoning" was read by Dr. R. G. Johnson.

COMMENCEMENT exercises for eighteen nurses of the Lutheran Hospital Training School for Nurses, Fort Wayne, were held May 3.

THE St. Joseph and Epworth Hospitals at South Bend are to be enlarged. The St. Joseph Hospital will erect a new addition that will cost $250,000 and the Epworth will expend $150,000 upon improvements and additions.

AFTER an enforced vacation of more than four months, Dr. G. M. LaSalle has resumed the practice of surgery at Wabash. As the result of an infection Dr. LaSalle was ill for many weeks.

THE Muncie Academy of Medicine held its regular meeting at the Hotel Roberts, Muncie, April 7. Dr. William T. Coughlin presented a paper on "Diagnosis of Surgical Conditions About the Head and Neck".

THE Madison County Medical Society held its regular meeting at the Grand Hotel, Anderson, April 18. A paper was presented by Dr. H. W. Gante, the subject of which was "The Allen Treatment for Diabetes".

DR. WILL SHIMER, of Indianapolis, has resigned as bacteriologist and pathologist for the State Board of Health to become bacteriologist and pathologist for St. Vincent's Hospital and head of its laboratories.

DR. CHESTER N. FRAZIER of the Irene Byron Hospital of Fort Wayne has received an appointment to the Rockefeller Institute, Peking, China. Dr. Frazier is a specialist in skin diseases.

THE Muncie Academy of Medicine held its meeting Friday evening, April 28, at the Hotel Roberts, Muncie. Dr. C. P. Emerson, Indianapolis, presented a paper on "Neuroses of the Twentieth Century".

DR. CHARLES S. WOODS, of Indianapolis, was made president of the Indiana section of the American Hospital Association to succeed Dr. George F. Keiper, of Lafayette, at the annual convention of the Association held April 19.

THE regular monthly meeting of the Kosciusko County Medical Society was held March 28 at Warsaw. "Urinary Stones" was the subject of an address presented by Dr. H. O. Mertz, of Indianapolis.

THE Porter County Medical Society held its meeting at Valparaiso, March 30, at the home of Dr. H. O. Seipel. Dr. Harry E. Mock, of Chicago, presented a paper on "Reconstructive Surgery as Learned from the World War".

DR. R. A. BARLOW, recently associated with the Mayo Clinic, has announced the opening of his office at 461 Farmers' Trust Building, South Bend, for the special practice of diseases of the ear, nose and throat.

THE United States Civil Service Commission announces an open competitive examination for dietitian. Applications will be rated as received until further notice. Applicants should apply at once for Form 1312, to the Civil Service Commission, Washington, D. C.

THE Muncie Academy of Medicine held a meeting at the Hotel Roberts, April 21. "Natural History of Bladder Infections" was the subject of an address presented by Dr. Hugh Cabot of the Michigan University School of Medicine.

THE joint meeting of the Jackson and Bartholomew County Medical Societies was held at Seymour, April 6. A paper on "The History of Endocrinology" was presented by Dr. L. B. Hill, of Seymour, and Dr. Gillespie, also of Seymour, presented a paper on "Obstetrical Problems".

THE Hendricks County Medical Society held its regular quarterly meeting at Danville, April 28. Dr. L. D. Carter, of Indianapolis, talked on the diseases of children and babies, and the care of the baby during summer months. A baby clinic was held in connection with the meeting.

AT the sixth annual meeting of the American College of Physicians, held in Minneapolis, the following officers were elected for the ensuing year: President, Dr. James M. Anders, Philadelphia; vice-presidents, Drs. Frederick Tice, Chicago, and Charles C. Bass, New Orleans; treasurer, Dr. Clement R. Jones, Pittsburgh, and secretary, Dr. Frank Smithies, Chicago.

THE United States Civil Service Commission announces an open competitive examination for Associate in Clinical Psychiatry and Psychotherapy. Applications will be rated as received until July 31, 1922. Applicants should at once apply for Form 2118, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.

COL. EDWARD GIBBS, who recently returned from Poland, where he went to study typhus conditions, states that strict precautions are necessary to prevent the scourge from spreading in this country. Dr. Gibbs reports that there were only three thousand physicians to cover the entire thirty million population of Poland, and that typhus is epidemic.

THE United States Civil Service Commission announces open competitive examinations for Laboratorian (bacteriology) and Assistant Laboratorian (bacteriology). Applications will be rated as received until further notice. Applicants should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.

IT has been announced that a course in diagnosis and treatment of syphilis of the nervous system will be given by Drs. H. C. Solomon and Henry Viets from June 5th to 30th, inclusive, at the Boston Psychopathic Hospital, the Massachusetts General Hospital and the Neuropathological Laboratory, Harvard Medical School. Enrollment is through the Graduate Office at the Harvard Medical School.

THE United States Civil Service Commission announces open competitive examinations for the position of Assistant Medical Officer (psychiatry) and Junior Medical Officer (psychiatry). Applications will be rated as received until further notice. Applicants should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.

AT the annual meeting of the American Congress on Internal Medicine, held at Rochester, Minnesota, the following officers were elected: President, Dr. Sydney R. Miller, Johns-Hopkins University Medical School, Baltimore; vice-presidents, Drs. Henry S. Plummer, Rochester, Minn., and S. R. Roberts, Atlanta, Ga.; treasurer, Dr. C. R. Jones, Pittsburgh, and secretary general, Dr. Frank Smithies, Chicago.

THE United States Civil Service Commission announces that there is need for nurses in the hospitals of the United States Veterans' Bureau and the Public Health Service and at Indian schools and agencies. Applications will be received for these positions until further notice. Full information concerning entrance requirements, salaries, etc., and application blanks, may be obtained by communicating with the United States Civil Service Commission, Washington, D. C., or the secretary of the civil service board at the post office or customs house in any city.

THE Marion National Sanatorium, formerly the Soldiers' Home, National Military Home, Indiana, is being converted into a sanatorium for disabled veterans of the World War suffering from mental or nervous diseases. More than 800 patients are receiving treatment now and there will be room for 150 additional ex-service men when the present changes are completed. A system of schools for the teaching of occupational therapy is provided and the prevocational training is conducted in the wards. Ground has recently been broken for a new eighty-bed tuberculosis hospital which will be opened September 1.

DURING March the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Abbott Laboratories — Izal; Izal Disinfectant Powder. Intra Products Co.—Ven Sterile Solution Mercury Benzoate 1 Cc. Merrell-Soule Co.—Powdered Protein Milk-Merrell-Soule. Parke, Davis & Co.—Pertussis Vaccine; Pneumococcus Vaccine (4 Types); Streptococcus Vaccine Polyvalent (Scarlatina); Typhoid-Paratyphoid Vaccine (Prophylactic). Seydel Manufacturing Co.—Benzocaine-Seydel. Winthrop Chemical Co.—Iothion; Iothion Oil; Sabromin; Sabromin Tablets 8 Grains. Acriflavine-Heyl; Proflavine-Heyl. These products are now marketed by the National Aniline & Chemical Co. and the Council has continued the acceptance for New and Nonofficial Remedies under the new firm name.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District—Councilor	No. of Counties	1921 Memberships	1922 Memberships to Date	Percentage
First—Dr. Willis	7	176	171	.97
Second—Dr. Schmadel	7	149	137	.92
Third—Dr. Leach	9	130	114	.87
Fourth—Dr. Osterman	10	128	133	.96
Fifth—Dr. Weinstein	5	158	154	.97
Sixth—Dr. Spilman	8	150	158	1.05
Seventh—Dr. Earp	4	425	429	1.01
Eighth—Dr. Conrad	5	172	157	.91
Ninth—Dr. Moffitt	10	253	244	.96
Tenth—Dr. Shanklin	5	151	131	.86
Eleventh—Dr. Black	6	191	190	.99
Twelfth—Dr. Morgan	8	241	236	.98
Thirteenth—Dr. Berteling	8	274	253	.92
	92	2608	2507	

JACKSON, BARTHOLOMEW, JENNINGS

A meeting of the physicians of Jackson, Bartholomew and Jennings counties was held at Seymour on April 6, with 22 physicians present. These union meetings have been held monthly during the past winter, alternating Seymour and Columbus as meeting places.

A banquet was held at six o'clock at the Hotel Fosgate, after which the following scientific program was given: "The History of Endocrinology", by Dr. C. E. Gillespie, Seymour; "Missed Abortion", Dr. L. B. Hill, Seymour.

The next meeting is to be held at Columbus in May.
Adjourned.

L. B. HILL,
Secretary Jackson County
Medical Society.

ELEVENTH DISTRICT

At the October (1921) meeting of the Eleventh Indiana Councilor District Medical Association, Dr. G. R. Daniels, of Marion, offered the following resolution which is to be voted upon at the coming meeting to be held May 18, 1922:

"To amend the Constitution and By-Laws of Art. 3. Sec. 2, by adding: and any member who may not attend the meetings of any year may withhold paying the dues for such year without forfeiting his membership."

Art. 3, Sec. 2, that the above resolution proposes to amend now reads as follows:

Sec. 2. (Amended October 16, 1919, to read:) The membership of this association shall consist of members in good standing of the county societies composing this district, who have paid annual dues into this association on or before the opening of the annual meeting on the third Thursday in May of any current year of its existence."

INDIANAPOLIS MEDICAL SOCIETY

Meeting April 25, 1922

Meeting called to order by the president. Minutes of previous meeting read and approved. Announcement made by the secretary that there would be a dinner meeting of the society on the 9th of May, at which time Dr. Clifford G. Grulee and Dr. Edwin C. Ryerson, both of Chicago, would be the principal speakers. No new business. Unfinished business consisted of the report of Committee on State Medicine, which follows:

Your Committee, firmly believing that the principle of our Government, as enunciated by the Constitution of the United States, "equal opportunity to all and special privileges to none," applies to the relations between the State and the Medical Profession, as well as between the State and other industries; that a free and untrammeled Medical Profession is necessary for the advancement of Medical Science, for the welfare of the Medical Profession and for the health of the people; that the Medical Profession as a whole, and not one physician or group of physicians, is responsible for public, as well as private health; that it devolves upon the Medical Profession directly and indirectly to educate the people to sound thinking on all matters pertaining to health and to guard them against socialistic schemes of selfish individuals and groups, after having considered every phase of so-called State Medicine, have agreed that:

WHEREAS, Your Committee recognizes the right of the State to supervise medical education, to conserve the health and well-being of its citizens, and to that end has the privilege and duty of erecting and maintaining institutions for medical education, for the care and treatment of its indigent population, and has the right and duty of fixing the standard for the proper performance of the Medical Practice Act, and,

WHEREAS, The State has the right and duty to conduct and maintain adequate State and County Health Boards, and insofar as it fulfills all these above indicated rights and duties, should have and does have the unqualified support of the Medical Profession in the fulfillment of these vested rights, which in no sense conflict with the principles hereinafter set forth, and,

WHEREAS, Certain abuses of the above rights and duties, which abuses, if unchecked, will develop into State Medicine, a term which to most physicians and people has meant everything and meant nothing, and which may be defined as the sum of a number of growing evil tendencies not commonly interpreted as having any part in Medical Socialism, and,

WHEREAS, The indicated abuses have been, and are still indulged in, and abetted by the State or its agents, we, therefore, offer the following resolutions as a platform of principles upon which the Indianapolis Medical Society should stand:

RESOLVED:

1. That while the Indianapolis Medical Society heartily supports the proposition that the State should care for its mental and moral defectives, and its indigent sick, it unqualifiedly condemns the tendency of the State to enter into competition with licensed physicians in the practice of Medicine and Surgery, and it condemns the maintenance of pay beds and wards in State Institutions or those partially subsidized by the State.

2. That it condemns the practice of appointing physicians to salaried and advertised positions and at the same time permitting these same salaried officials, free competitive rights against the profession to which they belong, and declares that no person employed in any of its Medical Institutions, Hospitals, or Colleges, either in whole or in part supported by State funds, who occupies a position of trust or a chair of teaching in any department of Medicine or Surgery and who receives pay or salary for such employment, should be accorded the privilege of private medical or surgical practice, so long as such person is employed by the State and receives pay for services from any State funds of whatsoever character.

3. That it commends the establishment of free clinics for the treatment of tuberculosis, mental hygiene, venereal, and other diseases of the indigent sick, but for no other than the indigent.

4. That it endorses in public health administration, full time salaried officers who shall not, during their service, have the privilege of private practice, nor any right of supervising private practice.

5. That it upholds the standard and purpose of the State Medical Practice Act and insists that all persons engaged professionally in the treatment of diseases, or the sick, whatsoever, of any description, shall be wholly subject to the same standard of educational qualifications and State examinations.

6. That while, at the present time, it recognizes the necessity of certain societies and industrial development to maintain adequate medical and surgical staffs, it deplores the growing tendency to widen the scope of contract and similar medical and surgical practice wherein the profession is not remunerated according to the usual competitive method and the patient not permitted to use his own selection of physicians.

7. That it condemns legislative enactments relative to all health matters, without the sanction and approval of the licensed and registered Medical Profession.

8. That it opposes lay and political domination of Medical and Surgical practice as opposed to sound public policy and to the scientific progress of medicine.

9. That, while it endorses the efforts of the agents of the Federal and State Governments in their desire to promote the health of the people, it condemns Federal supervision of State medical activities, masquerading under the guise of Federal aid or subsidy.

10. That it condemns the socialistic efforts of State, Federal, County or Municipal agents, to force the expense of private health upon the taxpayers, under the guise of Public Health.

11. That it condemns all "propaganda and elements at work" to create fictitious health problems, as attempts to socialize the Medical Profession, under the plea of "suffering humanity", whereby a great part of an independent people would be segregated into a pauperized class.

12. That it condemns the exploitation of special fields of medicine, surgery and obstetrics, by technicians, who are not qualified, licensed physicians.

Recognizing that the successful treatment of sick people depends upon personal and confidential relations between physician and patient, which relations are impossible under any of the indicated evils; and knowing humanity in its strength and in its weakness, in health and in disease, in wealth and in poverty, we, who dedicate our lives to the scientific investigation, prevention, and treatment of disease, with firm conviction in the ultimate wisdom of our course, offer these resolutions, and pledge our best efforts to uphold all true American ideals and principles.

BE IT FURTHER RESOLVED, That a true copy of these resolutions be immediately sent to the Secretary of each County Medical Society of the State of Indiana, to the Editor of the JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION, and to the Editor of the *Journal of the American Medical Association*.

FREDERICK E. JACKSON, M.D., Chairman,
JOSEPH RILUS EASTMAN, M.D.,
W. B. KITCHEN, M.D.,
THOMAS B. NOBLE, M.D.,
ALBERT E. STERNE, M.D.,

Committee on State Medicine,
Indianapolis Medical Society.

Each paragraph of the above resolutions was fully discussed by the Society, a motion made and carried to adopt each separate paragraph, after which a motion was made and carried to adopt the resolutions in their entirety.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

AMMONIUM ICHTHYOLATE-MEADOWS.—An aqueous solution, the important constituents of which are ammonium salts of indefinite, complex, organic acids, partaking of the nature of oxygenated bodies and sulphonates held in colloidal dispersion. It is derived from an oily distillate of a fossiliferous bitumen found in Texas. It is claimed that ammonium ichthyolate-Meadows has the therapeutic properties of ichthyol. (See New and Nonofficial Remedies, 1921, p. 344.) It is a reddish-brown, viscous fluid, having a faint odor. It is soluble in water and miscible with glycerine and fatty vehicles. Meadows Oil and Chemical Corporation, Durant, N. Y.—(*Jour. A. M. A.*, April 1, 1922, p. 967).

QUINIDINE.—QUINIDINA.—An alkaloid obtained from the bark of various species of Cinchona. Quinidine acts upon the heart in such a manner as to bring about cessation of fibrillation of the auricles in a certain proportion of instances. It is used to restore the normal rhythm of the heart in cases of auricular fibrillation. The drug is not without unpleasant and even dangerous effects. Cases of sudden death from its use have been reported. Quinidine is generally administered as quinidine sulphate. Two-tenths gm. given as a preliminary dose. If no untoward effects result, the drug is administered on the following day in doses of from 0.2 to 0.4 gm., from three to five times a day and continued for from one to three days.

QUINIDINE-P. W. R.—A brand of quinidine-N. N. R. Powers-Weightman-Rosengarten Co., Philadelphia.

QUINIDINE-N. Y. Q.—A brand of quinidine-N. N. R. New York Quinine and Chemical Works, New York.

QUINIDINE-M. C. W.—A brand of quinidine-N. N. R. Mallinckrodt Chemical Works, St. Louis.

QUINIDINE SULPHATE.—QUINIDINAE SULPHAS.—The sulphate of quinidine. For actions, uses and dosage, see under quinidine. It may be administered in the form of cachets, capsules, pills or tablets.

QUINIDINE SULPHATE-P. W. R.—A brand of quinidine sulphate-N. N. R. Powers-Weightman-Rosengarten Co., Philadelphia.

QUINIDINE SULPHATE-N. Y. Q.—A brand of quinidine-N. N. R. New York Quinine and Chemical Works, New York.

QUINIDINE SULPHATE-M. C. W.—A brand of quinidine sulphate-N. N. R. Mallinckrodt Chemical Works, St. Louis. (*Jour. A. M. A.*, April 8, 1922, p. 1051).

BENZOCAINE-SEYDEL.—A brand of benzocaine-N. N. R. (See New and Nonofficial Remedies, 1922, p. 39). The Seydel Manufacturing Co., Jersey City, N. J.

VEN STERILE SOLUTION PROCAINE 1 CC.—Each ampule contains 1 Cc. of a 1 percent solution of procaine-N. N. R. (See New and Nonofficial Remedies, 1922, p. 35.) Intra Products Co., Denver, Colo.—(*Jour. A. M. A.*, April 22, 1922, p. 1201).

VEN STERILE SOLUTION MERCURY BENZOATE 1 CC.—Each Cc. contains mercuric benzoate, 0.02 Gm. (1/3 grain). (See New and Nonofficial Remedies, 1922, p. 192.) Intra Products Co., Denver, Colo.

TABLETS OF MERCUROCHROME-220 SOLUBLE.—Each contains 4.6 grains. (See New and Nonofficial Remedies, 1922, p. 187.).—(*Jour. A. M. A.*, April 29, 1922, p. 1296).

STERILE SUSPENSION MERCURY SALICYLATE IN CACAO BUTTER 1 CC.—Each Cc. contains .097 Gm. (1½ grains) of mercuric salicylate. (See New and Nonofficial Remedies, 1922, p. 193.) Intra Products Co., Denver, Colo.

STERILE SUSPENSION MERCURY SALICYLATE IN OLIVE OIL 1 CC.—Each Cc. contains 0.097 Gm. (1½ grains) of mercuric salicylate. (See New and Nonofficial Remedies, 1922, p. 193). Intra Products Co., Denver, Colo.—(*Jour. A. M. A.*, April 29, 1922, p. 1296).

PROPAGANDA FOR REFORM

"PREMEDICATED" ALCOHOL.—A petition to permit the use of so-called "premedicated" alcohol in remedies for internal use has recently been placed before the Secretary of the Treasury and the prohibition officials. According to drug journals, such a petition was presented by the Counsel for the Proprietary Association—the organization of the "patent medicine" interests—and also by the Chattanooga Medicine Company—the makers of "Wine of Cardui". When thus medicated, the alcohol is to be tax free. This proposition contains dangers to medicine and to pharmacy in that it may render scientific control of such medicaments difficult.—(*Jour. A. M. A.*, April 1, 1922, p. 970).

NEPHRITIN, PEPTENZYME, TROPHONINE AND PANCROBILIN.—Sometimes the results of the application of the esthetic arts to commercial interests is incongruous. A house organ uses the names of famous writers, presumably to attract attention. Thus: It is suggested that if the physicians to Montaigne, who died of nephritis, had known of "Nephritin" they would have been able to furnish him with "substantial constructive help"—a statement which may be more readily accepted by litterateurs than by pathologists. Since all of us cannot live the simple life recommended by Joaquin Miller, as a means of avoiding indigestion, it is inferred that we must depend on Peptenzyme. It is related that Thomas Hood passed away in spite of soups and other nourishing food prepared for him by his wife. "Therefore," says the advertiser, "use Trophonine and live." "Like Victor Hugo," proclaims the advertiser, "millions today are eating the unknown and are paying the toll in constipation." He further asserts, "From whatever cause it originates—Pancrobilin is always indicated". Alas, Nephritin, Peptenzyme, Trophonine and Pancrobilin cannot avail Montaigne, Miller, Hood or Hugo now.—(*Jour. A. M. A.*, April 1, 1922, p. 971).

LEAVEN'S ASTHMA PRESCRIPTION.—This is put on the market by the Leavengood Drug Co., Rosedale, Kansas. The A. M. A. Chemical Laboratory reports that the composition of this preparation is essentially: Potassium iodide, 10.9 Gm., sugar (sucrose), 55.0 Gm., iron, a trace, water, flavoring and coloring matter to make 100 Cc.—(*Jour. A. M. A.*, April 1, 1922, p. 991).

EKSIP.—This is a mail-order "cure" for diabetes, marketed by Matthew Richartz with the slogan, "No more dieting! No more starving! 'Eat and get well!'." Eksip is sold in the form of tablets at $6.00 for 200. The A. M. A. Chemical Laboratory reports that the bulk of the tablets consisted of magnesium carbonate and starch. A small quantity of an unidentified drug was found. Alkaloid, heavy metals and emodin-bearing drugs were absent.—(*Jour. A. M. A.*, April 1, 1922, p. 991).

"PROPRIETARY PREPARATIONS IN POLAND".—The influence of the work of the American Medical Association—through its Council on Pharmacy and Chemistry and *The Journal's* Propaganda for Reform in Proprietary Medicines—in protecting the public, both directly and indirectly, against the nostrum evil, extends year by year. Especially is it noticeable when new legislation is created. Recently, the new Polish state introduced regulations governing the

(Continued on Adv. p. xx.)

The Endocrines, Digestive Ferments, Catgut Ligatures, etc.

THE ARMOUR LABORATORY is maintained for the purpose of handling the glands, membranes and other raw materials supplied by our abattoirs in immense quantities, from which important therapeutic agents are extracted and fabricated.

Among the products that the physicians and surgeons use daily are:

Corpus Luteum; Suprarenals, U. S. P.; Parathyroids; Pituitary, Whole Gland; Pituitary, Anterior; Pituitary, Posterior; and other glandular substances in po. and tabs. Pituitary Liquid in 1 c. c. and ½ c. c. ampoules.

Armour's LABORATORY PRODUCTS

Suprarenalin Solution 1:1000; Suprarenalin Ointment 1:1000; Pepsin, U. S. P.; Pancreatin, U. S. P.; and other preparations of the Digestive Ferments that are used in stomachic and intestinal disorders and as vehicles for nauseating drugs.

We also make Sterile Surgical Catgut Ligatures, plain and chromic, boilable; and Iodized Ligatures, nonboilable. ¶The Armour ligatures are made from Lambs' gut; selected especially for surgical purposes and sterilized at opportune stages in such manner as to preclude the possibility of contamination in the finished strings.

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Descriptive Literature on Request

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Devised by Dr. Frank W. Hartman and described by him in "The Journal" A.M.A., January 7th, 1922. Ready for delivery, complete as described.

Hynson, Westcott & Dunning

Pharmaceutical Chemists

BALTIMORE, MARYLAND

(Continued from p. 184.)

manufacture and sale of proprietary remedies. These regulations reflect the change in attitude that has taken place in the public mind in all civilized communities toward the responsibility of those who would make and sell preparations of the home remedy type. The Polish regulations have much in common with recent Austrian and Spanish legislation on proprietary medicines, and the influence of the English Proprietary Medicines Bill is apparent in the prohibition of the use of testimonials. While no quantitative disclosure on the label of the composition of the preparation is required, except in the case of potent drugs, the fullest details are demanded from the manufacturer, this information to be of such a nature as will enable the State Pharmaceutical Institute to prepare the preparation for the purpose of verifying the manufacturer's statements. The obligation of the manufacturer to keep a record not only of his production, but of all his supplies to wholesalers, is also a new feature.—(*Jour. A. M. A.*, April 8, 1922, p. 1071).

YEAST FOAM TABLETS.—Shorn of verbiage, "Yeast Foam Tablets" are claimed to be dried yeast in the form of tablets. They are put up in typical "patent medicine" style. The advertising for these tablets would lead the public to believe that it is in imminent danger of suffering from an inadequate supply of vitamin B. Though the Yeast Foam propaganda is plainly addressed to the public, specimen packages have been sent to physicians. Thus, the profession is given once more the opportunity to act as an unpaid peddler.—(*Jour. A. M. A.*, April 8, 1922, p. 1074).

HORMOTONE.—This is a "pluriglandular tonic for asthenic conditions", sold by the G. W. Carnrick Co. in the form of tablets for oral administration. Each tablet is said to contain 1/10 grain of desiccated thyroid, 1/10 grain of entire pituitary, together with the hormones of the ovary and testes—the amount and the form in which the latter are supposed to be present are not given. The Council on Pharmacy and Chemistry refused to accept Hormotone for New and Nonofficial Remedies.—(*Jour. A. M. A.*, April 8, 1922, p. 1074).

QUEEN OF ANTISEPTICS.—This preparation is marketed by a person in Aurora, Illinois, calling herself "Mme. Leonard". It is claimed to be "A Perfect Vaginal Germ Destroying Powder and Applicator". The A. M. A. Chemical Laboratory reports that the preparation is composed essentially of boric acid, 97 percent, and ammoniated mercury 3 percent.—(*Jour. A. M. A.*, April 8, 1922, p. 1072).

YEAST PREPARATIONS AND VITAMIN-B CONCENTRATES.—The Council on Pharmacy and Chemistry has adopted the following principles as a guide in the consideration of yeast preparations and vitamin B concentrates for New and Nonofficial Remedies: 1. The claim that deficiency of vitamin B and diseases resulting therefrom are common conditions in the United States is not at this time warranted. 2. The claim that yeast preparations or extracts are, in principle or in general, essentially more effective or more practical or a more available means of administering vitamins than the commonly available vitamin containing foods is not at this time supported by adequate acceptable evidence. 3. The claim that therapy with yeast or yeast preparations has as yet more than an experimental status is not at this time supported by adequate acceptable evidence.—(*Jour. A. M. A.*, April 15, 1922, p. 1146).

THE THERAPEUTIC USE OF YEAST AND VITAMIN PREPARATIONS.—Newspapers and magazines contain gratuitous reminders that we are confronted with menaces to health which not only ought to be averted but which can readily be remedied, when present, by the simple expedient of a potent proprietary vitamin preparation. If some of the claims of the advocates of a widespread yeast or vitamin therapy regarding the danger of vitamin starvation were warranted, one might still question whether the special "concentrated" or vitamin-rich medicaments were required to remedy the situation. An extensive inquiry has led the Council on Pharmacy and Chemistry to the deduction that disease states attributable to lack of vitamin B are not widespread in this country at the present time. Even an enthusiast will be forced to agree with the Council that yeast or yeast vitamin therapy has as yet nothing more than an experimental status.—(*Jour. A. M. A.*, April 15, 1922, p. 1127).

KOLOR-BAK.—This is a hair dye marketed by the Hygienic Laboratories, Chicago. It is claimed not to be a dye or stain but to restore gray hair to its original color. It is claimed to be harmless and not to contain powerful mineral ingredients. The preparation was analyzed in the A. M. A. Chemical Laboratory and was found to contain lead acetate, 0.6 Gm., and precipitated sulphur, 1.0 Gm., in 100 Cc. It is evident from the analysis that the claims made for Kolor-Bak are false.—(*Jour. A. M. A.*, April 15, 1922, p. 1146).

MORE MISBRANDED NOSTRUMS.—The following proprietary preparations have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act:

DIEMER'S MANHOOD TABLETS (Dr. F. W. Diemer Medicine Co.), consisting chiefly of sodium bicarbonate, reduced iron, a compound of zinc, phosphorus and small amounts of capsicum, strychnin and an extract from a laxative plant drug.

SANTAL-MILLER (General Drug Co.), consisting essentially of San-tal oil and claimed to relieve or cure gonorrhea.

LONG'S KIDNEY AND BLADDER REMEDY (Wm. T. Long Medicine Co.), capsules containing phosphorus, extractives of damiana and nux vomica.

BANES' FEMALE PILLS (Dr. A. V. Banes Medicine Co.), consisting essentially of compounds of calcium, magnesium and iron, and mercury, capsicum, sugar and aloes.—(*Jour. A. M. A.*, April 15, 1922, p. 1146).

SA-TAN-IC (Sa-Tan-Ic Medicine & Mfg. Co.), containing magnesium sulphate, cascara bark extractives, salicylic acid, methyl salicylate, oil of peppermint, water and a trace of alcohol, claimed to be a blood purifier, system renovator and a remedy for stomach, kidney and liver complaints.

BANES' KIDNEY AND RHEUMATIC REMEDY (Dr. A. V. Banes Medicine Co.), containing sodium and potassium compounds of iodine, acetic acid, nitric acid and salicylic acid, vegetable extractive matter, sugar, alcohol and water.

SILVERSTONE'S SEXUAL PILLS (S. Pfeiffer Mfg. Co.), consisting essentially of plant extractives, including resins, nux vomica, alkaloids and damiana.

NUX-AURO-PAPANAD, pills containing strychnin, salts of zinc, calcium and lithium and creosote, claimed to be indicated in Vaso-Motor Paresis, Neurasthenia, Melancholia, Malnutrition, General Debility and Sexual Exhaustion.

PAULETTE'S BRAND TANSY TABLETS (Fay & Youngs Rubber Corp.), claimed to be the most reliable tablets known for the suppression of the menstrual function.

EELLS' VITALIZING BLOOD PURIFIER (F. Eells & Sons Co.), a water-alcohol solution consisting essentially of sugar, Epsom salt, laxative plant material and traces of oil of wintergreen and oil of sassafras.

LE SIEUR'S SYRUP OF TAR AND COD LIVER EXTRACT (Ocean Mills Co.), containing chloroform, menthol, oil of tar, ammonium salts, sugar, water, and a small quantity of alcohol.—(*Jour. A. M. A.*, April 22, 1922, p. 1218).

JUN 26 1922

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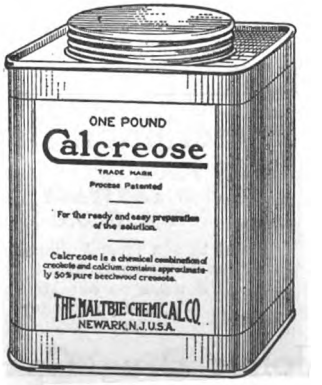
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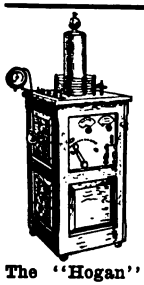
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ORIGINAL ARTICLES

OSTITIS FIBROSA CYSTICA*

A PATHOLOGICAL CONSIDERATION

VIRGIL H. MOON, M.D.
INDIANAPOLIS, INDIANA

Ostitis fibrosa cystica, often spoken of as ostitis fibrosa, is a more common disease than is generally supposed, as is evidenced by the fact that three cases have come under our observation in less than a year's time. The essential features of this condition were probably first accurately described by von Recklinghausen in 1891, hence the disease is sometimes known under the name of von Recklinghausen's bone disease. The salient characteristics of the disease consist in a proliferation of fibrous tissue in the medullary cavities of the long bones, accompanied by absorption of bony substance resulting in rarefaction, moderate enlargement, and weakening of the bone. Usually but not regularly cyst formation is a prominent feature. It is a disease of childhood and youth, the great majority of cases occurring before the age of twenty. It is suggested as probable that those cases occurring after full maturity developed during youth and remained unrecognized until some years later. The disease is insidious in onset, usually painless, and produces few early symptoms. It most frequently happens that attention is first called to the condition by the occurrence of a spontaneous fracture, or by one resulting from unusually slight injury.

Bloodgood gives the frequency of occurrence in different bones in the following order: humerus, femur, tibia. Muller, in reviewing all the cases of which he had record, found the frequency of occurrence in the order: femur, tibia, humerus. Of the three cases here reported, two were in the femur and one in the tibia. The metacarpal and phalangeal bones are occasionally involved, but the occurrence in other bones is rare.

Microscopically the marrow substance is displaced by a uniform growth of fibrous tissue of a peculiar type. This occupies the entire marrow space, extends into the canals and lacunæ of the compact bone and separates the lamellæ of the hard, bony shell. There is absorption of calcareous material, leaving only a very thin outer shell of the shaft. The periosteum is intact and apparently unaffected. Giant cells are not numerous but are occasionally seen. These are of the type of osteoclasts or of foreign body giant cells rather than resembling those of giant-celled sarcoma. Occasionally small islands of cartilage cells are found embedded in the fibrous tissue or in cysts near the epiphyses.

Cyst formation is a frequent and much discussed feature of the condition, but is not present in all cases. The fluid of the cysts is not under marked pressure and is thin and of a yellowish, reddish or dark brown color. It contains varying amounts of blood cells and pigment, but according to Bloodgood is not distinctly hemorrhagic. The cysts may be single or multiple and may or may not have a distinct limiting membrane. In an analysis of 69 collected cases, all having the character of ostitis fibrosa as shown by the characteristic proliferation of fibrous tissue and by the accompanying rarefaction, Bloodgood found the following variations in regard to cyst formation: (1) A single cyst with bony shell but no connective tissue membrane or lining, 22 cases; (2) a single cyst with definite connective tissue lining of varying thickness, 6 cases; (3) a small cyst or cysts within a solid mass of ostitis fibrosa, 6 cases; (4) no cyst, but the bony shell filled with a solid mass of ostitis fibrosa, 7 cases; (5) multilocular cysts, 6 cases; (6) a miscellaneous group in which the data were incomplete or the cases complicated by the presence of other disease condition, 12 cases.

It is noteworthy that in the above group only a small number, about 10 percent, were purely ostitis fibrosa without cysts. In only one of the three cases which we have seen was cyst formation a feature. Lewis believes that degeneration of the proliferated fibrous tissue, with resulting liquefaction may give rise to the cysts.

Grossly the intact periosteum, the character of the cyst fluid, and the peculiar fibrous character of the medullary substance are stated to

(*) Presented before the Section on Surgery of the Indiana State Medical Association, Indianapolis session, September, 1921.

be of diagnostic value, on exploratory incision, in differentiating ostitis fibrosa from sarcoma.

ETIOLOGY.—The etiology of ostitis fibrosa is entirely obscure. Only a brief summary will be given of the various explanations offered. Many regard it as the result of some injurious agent or irritation. The statement is occasionally found, both in English and in German literature, that if the bone marrow is analogous to a parenchymatous organ such as the liver, ostitis fibrosa might be compared to cirrhosis. This analogy is not perfect since cirrhosis is general throughout the organ and there remain recognizable liver cells between the strands of fibrous tissue, while in ostitis fibrosa the condition is local, and where perfectly formed there are no recognizable remnants of marrow substance. Furthermore, ostitis fibrosa does not confine itself to the marrow spaces of the bone but invades the dense bony shell, causing separation, absorption and rarefaction of the lamellæ. Bloodgood describes the fibrous tissue as inflammatory in nature, and the term ostitis fibrosa itself implies inflammation of bone with fibrous proliferation, but no one as yet has presented evidence as to the character of the injurious agent or irritation which calls forth this proliferation of fibrous tissue.

Various disturbances of metabolism and abnormalities of endocrine function have been thought of as causes. But a metabolic deficiency or abnormality should exert its influence rather diffusely throughout the skeletal system, whereas ostitis fibrosa is a local, not a general, condition. Occasionally ostitis fibrosa occurs in one having a history of previous systemic disease such as rickets. This was true in one of the cases here reported, but such is not of sufficient frequency to be of significance. No hereditary nor familial occurrence has been noted, and there is no evidence of the occurrence in one sex more frequently than in the other.

Ostitis fibrosa is often indexed among tumors, which is probably as much for the sake of convenience as it is for definite evidence of neoplastic character. In the sections which I have studied microscopically the cells resemble a purposeless uniform proliferation of connective tissue, rather than granulation tissue resulting from the action of any injurious agent. Some slight infiltration with inflammatory cells, of mononuclear type, is present in some areas but no more than is frequently seen in areas about benign tumors. Ostitis fibrosa yields readily to surgical treatment where the involvement is not too extensive. Incision and curettage of the involved medulla, in suitable cases supplemented by bone grafts, frequently interrupts the course of the disease and a return to normal condition follows. Obviously such a procedure cannot be expected to remove all the overgrowth of fibrotic tissue, and in this particular the disease presents a striking contrast to neoplasms for neoplastic growth does not subside upon partial removal. No metastases are formed, and the course of the disease would mark it as unquestionably benign should we assume it to be a neoplastic growth. Benign neoplasms usually have a capsule and regularly have a sharply defined margin of growth. These features are conspicuously absent in ostitis fibrosa, for the lesion has an indefinite margin and the growth of fibrous tissue is distinctly infiltrative in character. Should this disease be admitted as a neoplastic growth it would almost belong in a class by itself, since it has few features in common with other neoplasms.

Some authorities believe that by a process of metaplasia the bony tissue has given rise to a proliferation of cells of a fibrous tissue character. This view probably has as many supporters as has either of the other attempted explanations, notwithstanding that modern pathologists are very conservative concerning the possibility of a fixed tissue undergoing a metaplasia into a distinctly different type of cells.

In the first case reported by Dr. Oliver the x-ray pictures taken at intervals of months during a period of years showed a progressive involvement extending finally throughout the shaft of one femur and appearing later in the upper end of the opposite one. We believed this might be an obscure infection with some organism of low virulence. Acordingly the following procedures were instituted: Dr. Oliver performed incision and curettage of the recently involved femur, using most careful precautions to exclude contaminating organisms. No cysts were found, so scrapings from the involved medulla were planted in a wide variety of specially prepared culture media. Among these were dextrose-serum-agar containing bits of fresh bone medulla obtained aseptically from the ribs of a young dog. Others contained splenic pulp similarly obtained. Serum-broth similarly enriched with fresh living tissue was also used. Tubes so prepared were incubated both aerobically, anaerobically and with partial exclusion of oxygen. No bacteria of any kind grew in any of the tubes in a period of two weeks during which daily observations were made.

Portions of the involved bone from two of the cases here reported were sectioned and prepared with stains for bacteria. A careful microscopic search resulted in no organisms of any kind being found in any of the sections. These results coincide with those of others who have had negative results in attempting to demonstrate bacterial infection as a causative factor in ostitis fibrosa.

A further discussion of the etiology of ostitis fibrosa is not profitable at this time. It remains

one of the few diseases in which progress in diagnosis and treatment has far outstripped an understanding of the nature of the cause.

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DISCUSSION

DR. CHARLES M. MIX (Muncie): The outstanding thing in the clinical diagnosis of this condition is the fact that practically all of these cases will come to their physician with a history of fracture without trauma. Such cases of course are subjected to the x-ray now and peculiar conditions are found which should lead to correct diagnosis. The x-ray is a very important feature, and of course the pathological examination makes the diagnosis complete.

Perhaps it is not wise to theorize or comment much on the etiology of this condition which is admitted not to be definitely settled, and likewise the nature of the pathology. I would like to make this comment, however. In dealing with fractures and with osteomyelitis, with sarcoma, with lues or syphilis of the bone, we have two processes going on there simultaneously or at different periods—a rarefying process and a productive process. I think we can safely say that in ostitis fibrosa we have a disturbance in the normal metabolism of the bone —perhaps that is not exactly the right word, but there is a disturbance of the normal growth of the bone. We have in this condition a rarefying process beyond the normal in the formation of the cyst, and we have a proliferating process which produces a fibrous tissue.

In regard to the treatment, we are not likely to get into many difficulties. Apparently almost anything you do helps. A pathological fracture apparently has a tendency to initiate a cure. A curettage and thorough scraping out certainly starts a process which tends toward cure. So if we can differentiate this from sarcoma we are pretty safe, and we are still safe because any radical operation for sarcoma of the bone has been abandoned. So even then your palliative treatment helps. I just wonder, inasmuch as this is a fairly new condition and diagnosis of bone tumor is obviously difficult, if some of the cases which Coley reports as cured by the use of his toxin, may not have been cases where diagnosis was wrong and we might have been dealing with some such condition as this.

DR. G. D. MARSHALL (Kokomo): In noting the radiographs thrown on the screen there was but one that seemed a typical ostitis fibrosa. Ostitis fibrosa is usually more uniform in outline. Most cases involve the shaft and the enlargement of the bone is more fusiform than the cases we have seen here.

The etiology of ostitis fibrosa or of bone cyst is a matter of considerable conjecture. In ostitis fibrosa, Jones suggests that the treatment be a multiple-longitudinal incision of the periosteum with relief of weight bearing on the bone.

Personally, I think most of these cases are the result of focal infection. I have had a case in my own practice in which the woman had been subject to long continued pelvic infection with involvement of the phalanges. This evidently had been a proliferative inflammatory condition with decalcification of the bone which led to cyst formation, and this condition followed by eburnation of bone. This patient had a chronic salpingitis. The right tube was a pus sack, with the periodical evacuation of pus from this pyosalpinx. So she had been subject to continued infection.

PUERPERAL ECLAMPSIA*

JANE KETCHAM
INDIANAPOLIS

Puerperal eclampsia is one of those diseases so dramatic and so terrifying in their effect that the question of the nature of the disease has always been overshadowed by the question of treatment. The first and very natural thought of almost every obstetrician is, since this disease is bound up with pregnancy, "What is the best way to terminate the pregnancy, thereby curing the disease." This attitude is wrong. In the first place some of the most terrible cases of eclampsia have come up following delivery; there apparently having been no prodromes. Moreover, there are many cases where a very rapid delivery has seemingly not influenced the eclamptic condition in any way. Entirely aside from the question of whether to treat the disease according to the radical or conservative method, nothing will really be learned of this dreadful condition until much more is done in the study of these fulminating cases. The three questions which should be taken up are. (1) What is the nature of eclampsia? (2) How may it be foreshadowed or prevented? and (3) How shall it be treated when it has reached its terrifying climax?

In the first place, what is the nature of eclampsia? The popular theory is that it is indissolubly bound up with nephritis. It remains to be seen whether or not this is true. Every medical student knows that urine of the gravida should be examined frequently in order to forecast eclampsia. It does not take very much experience to discover that many cases of eclampsia are ushered into full bloom with the merest traces of albumen, and that many a woman carries albumen and granular casts chronically and does not become eclamptic. On the other hand we have seen cases of florid

(*) Read before the Section on Medicine of the Indiana State Medical Association at the Indianapolis session, September, 1921.

eclampsia who give a history of scarlet fever in infancy, no evidences of nephritis in the intervening time with the eclamptic attack many years following—the history of early nephritis having been all but forgotten. It may be that careful prenatal observation will be able to correlate these diverse findings; but to date, about all we have to go on is preparedness and watchful waiting.

In many women, the entire metabolism seems perverted, from the time of impregnation until they are relieved of what seems to be a foreign body. Whether this is a true protein poisoning or an endocrine disturbance is yet to be worked out. Much work is being done and the advocates of the endocrine theory think that much can be done by supplying various hormones. I will say that the very worst case of eclampsia I have ever seen was a young girl of 19 years, who had a complete thyroid extirpation when she was 13 years old, and it was very evident that she was suffering from a thyroid deficiency. The usual treatment of eclampsia suggests that the profession in general has the opinion that the origin of this trouble is in the intestinal tract, and certain it is that the premonitory symptoms are relieved, if not cured, by prompt attention to the emunctories. However, we cannot say that auto-intoxication explains the fulgurant cases of eclampsia, which are so sudden in their onset and so fatal. In 1911, Abderhalden presented his theory that the syncytial cells are thrown into the blood stream from the placenta, and that in normal blood a hemolytic ferment is developed which digests these cells, that where this ferment is not developed a protein poisoning develops. Thus we have three unproved occasions for eclampsia, which are: the overwhelming of the system by massive intestinal intoxication, the endocrine disturbances, and the lack of development in the blood of a proper defense to the cells thrown from the placenta.

Which leads me to the second phase of my subject: How may eclampsia be foreshadowed? The routine examination of urine is no new thing and needs no advocate. Albumen in the urine in the voided specimen means little or nothing. The presence of casts, especially of the granular type, is much more disquieting. The 24 hour quantity should be frequently measured and compared with the intake. After trouble has developed and the patient is in the hospital, this comparison of output and intake should include the approximate measurement of the water content of the stools. This is important. The blood pressure should be taken at frequent intervals and furnishes one of the best indicators of impending trouble. It is desirable, even if no trouble comes, to have an idea of what the patient's normal reading is. Along this same line it is routine to have at least one phenol-sulphone-pthalein test before the onset of labor. The patient should be often asked as to her vision, and her eye-grounds often examined. Retinal exudates and hemorrhages are among the most classical signs of impending eclampsia. The subjective signs the women complain of are bladder irritability, which includes scantiness and frequency, pain, etc.; headaches, and swellings which are not important as long as confined to the feet, but when found in the hands and face are very important; black spots before the eyes, and drowsiness. The objective signs are mounting blood pressure, chemical and microscopic pathological condition in the urine, and positive eye signs. These signs do not differentiate between true eclampsia and uremia, and indeed only the clinical course and the response to treatment are the means we have found, so far, of differentiating true and spurious eclampsia. There is no reason why a nephritis, chronic in type and due to an old scarlet fever, to repeated attacks of tonsilitis, to bad teeth or chorea, or to the thousand and one causes for nephritis, might not be an underlying occasion for kidney deficiency, to which the added burden of pregnancy might mean a serious breakdown of the kidneys, but that is not true eclampsia. On the other hand, we often find placentæ with infarcts where there has been the possibility of a long absorption of dead placental tissue into the general circulation with consequent protein poisoning.

There are two classical treatments for eclampsia, and each has ardent advocates; the conservative and the radical. Edgar, *A. M. A. Journal*, August, 1919, declares that 8 to 10 percent of eclamptics die regardless of treatment, and that 80 to 90 percent will recover under conservative treatment, which does not include shock producing operations nor shock producing drugs. The conservative treatment hopes to give the patient time to recover from her toxemia before emptying the uterus, and the radical advocates declare that the toxemia will not be relieved until the uterus is emptied; therefore, they demand as early emptying as is compatible with safety. My thought is this: We are dealing with a disease the causation of which we do not know. We do know, however, that the mortality is high both for the mother and the child. We know that in all probability the primipara will empty slowly if left to her own devices, and that equally probable, the multipara will be much quicker. We must not overlook the possibilities of uterine inertia, however, in either case. We also recognize the child as a foreign body, and in the presence of a mounting systolic pressure we know we cannot delay too long. If there ever was a disease where we are to be justified in treating each case as an individual this is the disease.

The conservative treatment is outlined by Dr. Ross McPherson of New York as follows: Take the blood pressure. Wash out the stomach and before withdrawing the tube introduce two ounces of castor oil. Give colon irrigations of five gallons of 5 percent glucose solution and control convulsions by administration of large doses of morphine. The initial dose is one-half grain, repeated in one-fourth grain doses until the respirations fall to 8 per minute and convulsions are under control. If systolic pressure is 175 mm. Hg or over, phlebotomy is practiced until the pressure reaches 150 mm. Hg. Under this method he claims in 67 true convulsive toxemias the mortality showed a maternal mortality of 7.4 percent and a fetal mortality of 28.59 percent. While under radical treatment maternal mortality is 30 percent and fetal mortality is 40 percent. The danger of morphinism to the mother is not so great as might be expected as the uterine contractions tend to bring out the patient; it is, however, very hard on the child if delivery is effected before the effect of the morphine wears off, asphyxia resulting.

The radical emptying of the uterus is followed by every possible means of elimination. Cæsarian section is, undoubtedly, the quickest means of emptying the uterus, and is, in certain cases, justifiable; but it is also undoubtedly one of the most serious of operations because of the poor condition of the mother. In a multipara where it is fairly reasonable to believe that the uterus can be quickly emptied, it is better to induce with pituitrin or manually dilate the cervix, or with Champetier de Ribes bag, and either apply forceps or do a Braxton-Hicks. The action of pituitrin is very fleeting, and I have no hesitancy in giving a full cc. where the emergency is great. I prefer, however, to give five minim doses q. 2 hours until a cc. is given, the whilst giving castor oil or croton oil by mouth if the patient is able to take or by tube if she is not. At the same time a Watkins enema is given, followed by copious proctolysis and a hot pack with ice to the head. In favorable cases Veratrone is employed, but it is a treacherous drug, and is not given if the pulse is faltering any or is even slow and heavy. This fairly conservative treatment can be interrupted at any time for more radical measures.

To revert to the question of Cæsarian section, it must not be forgotten that we have to deal with the situation in hand, but we have also to protect the woman in her future deliveries; and section once practiced does not necessarily inhibit future vaginal deliveries, but it certainly increases their risk. If a section can be reasonably avoided, it should be avoided; but on the other hand, if there is any possibility of its being done, every effort should be made to prevent contamination of the vaginal passages.

So much for antepartum eclampsia. To recapitulate: In the presence of increasing albumen, casts, stupor, diminished urine, positive eye signs and mounting blood pressure, put the patient to bed and stimulate elimination every way possible; if convulsions appear, either control with large doses of morphine, or, in the presence of increasing systolic pressure, empty the uterus by section or forced vaginal delivery.

A much more serious situation is postpartum eclampsia, for the obvious reason that the uterus is already emptied. Phlebotomy, if done, will make for a blood concentration and should not be done without being followed by a replacement of fluid lost, either by intravenous or by proctolysis. Someone has suggested that salt solution should not be used as salt may be absorbed and add to the already present edema and tap water is better. It has also been considered that glucose will stimulate the glycogenic function of the liver, which function is greatly interfered with in eclampsia. I believe that both morphine and veratrum are very depressing and should be used, if at all, with the greatest caution in postpartum eclampsia. The blood pressure should be taken frequently and not be allowed to fall with too marked rapidity, as your patient will surely die from myocardial failure. Strophanthine has been a great comfort to me in the presence of failing myocardium. Uterine contraction should be stimulated by ergot, ice bags and pituitrin in order to see that no membranes or clots are being retained. The bladder should be emptied by catheter at regular intervals for the purpose of study. The main reliance should be on stimulation of the skin by hot packs and of the bowel. Each case should be watched closely and treated empirically. Lumbar puncture, in continued convulsions, is advised.

These fulminant cases of eclampsia are not seen in private practice as they used to be because of the prenatal care that is being given by all doctors. Even in hospital work the dispensaries have done much in the way of prevention. We can never know how many cases might have been eclamptic but for prenatal care.

It is not too much to hope that in time the newer blood chemistry will be able to differentiate between what is primarily renal and what is cardiac in the so-called cardio-renal cases. No one will dispute that eclampsia and uremia are very similar, but it is possible in given cases to differentiate between the two clinically, and certainly at postmortem. For instance, in eclampsia you have a sudden rise of objective symptoms and their subsidence after the removal of the offending cause. In true uremia

the renal disturbance is present long after delivery. At autopsy in uremia you have the swollen capsule of the kidneys with choked glomerulli, but without much change in the liver; whereas, in eclampsia you find the fatty necrosis of the liver with fatty degeneration and edema of the brain. The kidney disturbance in eclampsia is probably secondary. So far, there has not been a great deal of work done on eclampsia, but there has been a great deal of work done on uremia. For one thing in eclampsia, you are faced with a situation demanding immediate conclusions in the vast majority of cases, and it takes time to work out a conclusion from the blood. But as in a case as given below, the case was delivered and a true diagnosis was made subsequently, certainly the blood chemistry was of the greatest value.

In normal pregnancy there has been found a slight nitrogen retention and that the figures for toxemia do not rise much above what is found normally, namely: 40-6 mgs. urea per 100 cc. of blood, which indicates that there is a normal acidosis found in the pregnant state. Moreover, the starvation which is more or less present in any labor case, plus the anesthetic, might be the occasion of any increase of acidosis. The acidity of the blood has been found to be increased in the presence of convulsions and in proportion to the number and severity of the convulsions. The carbon-dioxide combining power is reduced in the presence of toxemia, which also tends toward the acidosis theory; the variations met with, however, are slight. Cholesterol is usually increased and lecithin is diminished. If acetone is found it is of strong diagnostic importance. Clinically, the amount of soda necessary to render the soda alkaline is a slight indication of the systemic acidosis, although, of course, it has little or no effect on the blood, which is necessarily an alkaline fluid. Creatinine increase is of very bad prognosis, also an increase of Ambard's coefficient, both of which signs are of renal insufficiency. It is to date impossible to distinguish between the blood signs of these diseases, and it is extremely desirable to work along these lines in order that more may be learned of the causation of eclampsia, as only in this way is it possible to intelligently hope to do much, either in the way of prevention or cure.

A young woman, age 26, was brought into the hospital with a general and very marked anasarca, not in labor. The urine showed nothing abnormal, and her phenol-sulphone-pthalein test for two hours was 82 percent. She was put to bed on a limited fluid diet, but with no other treatment. The first 24 hours her intake was 1000 cc. and her output was 3000 cc. approximately. First stage pains came on and were borne with a most hysterical attitude. Her anasarca melted away. With the subsidence of her edema she had a convulsion, and her blood pressure, which had been systolic 140 mm. Hg, went to 200 mm. Hg during the convulsion. Her mental state became very torpid, and her urine practically nil. Forceps were applied and a living child withdrawn. The creatinine was only slightly increased, the other blood analyses being negative in their readings. Blood nitrogen was done, Ambard's coefficient found, etc. Had this case gone on she would have been a serious case of true eclampsia, the diagnosis resting on the increased blood pressure, the urine findings, the increase of creatinine, and the absolute torpor; and I believe the condition resulted from the blood concentration, which came about when the edema disappeared.

Another young woman came into the hospital with most violent convulsions following one another in close succession. No urine could be obtained. She gave a history obtained from her husband of intense headaches for the two days preceding the onset of her convulsions. Magnesium sulphate was given by the tube, ether anesthetic was given, a Braxton-Hicks was done, and a dead seven months fetus was withdrawn. Convulsions did not stop and a phlebotomy was done, withdrawing 800 cc. of blood which was replaced by normal salt intravenous. Glucose was given by proctolysis q. 6 hours for several days. Hot packs were given twice. After several weeks the urine still contained a trace of albumen. This patient had retinal hemorrhagic exudates. Her vision at the end of three weeks was impaired. She remained in coma for three days. Her senses were obtunded for some little time, and there are at least two weeks gone out of her life of which she has no recollection at all. This is very characteristic of true eclampsia.

Conclusions. Blood chemistry was done on two supposedly eclamptic cases of mine recently. One case, age 39, a primipara at term, came to my service in the City Hospital. Her pressure, on admission, was 165-90. Her urine had albumen 4 plus, and many granular casts. Her mentality was perfectly clear. She was given castor oil by mouth, and a Watkins enema, followed by a prolonged colon flushing and a hot pack. Under this care her systolic pressure rose to 210, her eye grounds were negative and her urea 226 mg., creatinine 18 mg. per 100 cc. of blood. Although she had no convulsions because she was a primipara and age 39, and because her pressure was high, a Cæsarian section was done and she was delivered of a living child. Had this case been subjected to a slow vaginal delivery, she might have become eclamptic; but certainly, in the absence of convulsions, and in the presence of a perfectly clear mentality, I should hesitate to call her anything more than a potential eclamptic.

On the other hand there was admitted to the hospital a white woman, age 22, who gave a history of scarlet fever in infancy, with nothing intervening until this illness. She had complained of severe headaches the day before entering the hospital, and had seen her doctor, who had examined a specimen of urine and had given her a free purge. She entered the hospital in a deep coma, and all told had ten convulsions. Her blood pressure was never over 160, but her pulse was rapid. No urine was obtained by catheter on her entry. The eye grounds showed both exudates and hemorrhages; creatinine was 1.48 per 100 cc. and urea was 52.4 mg. per 100 cc., the urea being slightly high. Conservative treatment did not influence the progress of the disease and she was dilated with bags, and delivered of a dead child. She did not regain consciousness, and died following a profuse postpartum hemorrhage.

Neither of these cases shows any appreciable alteration in their blood chemistry. I have given pituitrin to eclamptics both to assist in inducing labor and to form contractions following delivery. I always give it with the cuff on the arm, and so far have seen no deleterious results on the blood pressure from its administration. I do not favor the use of veratrum because it is a depressing drug in the first place and in the second place it is aimed not at the cause underlying the high blood pressure, but at the blood pressure itself. Now the blood is one of nature's defenses and little good can be obtained by striking blindly.

Except in extremely grave cases I do not use antepartum phlebotomy. These patients usually bleed at delivery, how much we never know beforehand, so that a previous blood letting may let the defenses down too low. A postpartum venesection is oftentimes of greatest value.

In conclusion: Eclampsia is a condition associated with pregnancy, the importance of which cannot be overestimated. Not much is known at the present time as to the causation of the disease. Early emptying of the uterus in a frocible manner is not always a wise procedure as the patient is not a good surgical risk. The dangers are: death from shock, from hemorrhage and from exhaustion. High blood pressure is not in itself a thing to be feared, as it is in the nature of a protection to the patient. Also high blood pressure by itself is not an indication of impending eclampsia. There are a good many causes of high blood pressure, which may be present without nephritis and many a case of hypertension may go through labor without eclampsia. The conservative treatment is the treatment of choice. Prenatal work will prevent many a case of eclampsia, and this will include careful watching of the urine, the comparison of intake and output of fluid, the phenosulphonthalein test, the regular use of the sphygmomanometer and ophthalmoscope. Rest in bed, purgation and an alkaline diet, at any evidence of nephritis, will enable many a woman to carry her pregnancy to a successful end who might, without observation, have been one of the many victims of this dreadful disease.

DISCUSSION

DR. CHARLES S. BOND (Richmond): I know of nothing which the doctor encounters that is so demoralizing and humiliating as eclampsia. It is so sudden in its onset, it brings terror to everyone in the house, and something must be done immediately to relieve the difficulty. The attacks come on in women close to term, and they are much more frequent in primipara than in multipara. The whole question seems to me to be one of pressure, the placing of the body of the child against returning currents of blood in the mother. Another thing we must think of is that the mother is taking care of the sewage of two persons. She is not alone taking care of her own creatinin and so on, but as the child grows more work must be done, and I think the argument holds good all the way through that it is a question of wastes being thrown into the blood of the mother which she is not able to care for through her avenues of sewage function.

If the mother in infancy has had scarlet fever and has kidneys already blocked to a certain extent, it stands to reason that this mother would have difficulty long before a normal one would. If therefore pressure is the fundamental factor, if it is a gradual filling of the body with waste material that it cannot eliminate, then the argument would be all in favor of getting the cause away as soon as possible. I have had eight cases of eclampsia and the eight women are now living, and if I were called again in such a case I would go back to the same treatment, that is, the delivery of the child, without great haste, but as soon as possible.

Prevention of course is the means to be resorted to in case the patient consult the doctor in time. When albumen occurs in the urine and the feet, hands and face become swollen, the patient should be given liberally of Epsom salts, and from 2 to 10 drops of spirits of glonoin in one-fourth glass of water every two or three hours until the swelling has disappeared. The albumen is of little consequence if not accompanied with general anasarca. If this plan is followed you should have very few cases of eclampsia.

DR. ELMER E. MORGAN* (Fort Wayne): I want to object to the application of forceps in an eclampsia. You can do a podalic version according to the method of Potter and do much less harm than by applying forceps.

*Deceased.

DR. WILLIAM F. SMITH (Huntington): This is a subject that I am much interested in and I wish to compliment the essayist. In 1904 I had five cases of eclampsia, not all my own, and in none of them had I examined the urine. In one case the mother went into convulsions about the time I was called, there was no dilatation whatever, so I did manual dilatation and delivered a breech case. I pushed up the breech and brought the child down and delivered it. This is a very interesting subject to me. In this series of five cases we saved all the mothers but one, and two of the babies were lost. In this one mother the delivery did not seem to help her. She was very toxic. She was delivered about five o'clock and died about six and the convulsions never stopped before death.

DR. CHARLES H. GOOD (Huntington): Of all the tragedies of the lying-in room nothing strikes such terror as eclampsia, and anything we can listen to that will help to prevent this is certainly worthy of fullest consideration. We have had a splendid paper. I have had thirty-six cases of eclampsia in thirty-five years' practice, with twenty-eight recoveries and eight deaths. I think that is an average record. In a paper presented before the American Gynecological Association this year about 30 to 35 percent was the death rate given, and I wish to congratulate Dr. Bond on his experience.

DR. MORRIS H. C. JOHNSON (Vincennes): I would like to ask what experience Dr. Ketcham has had in the dislocation of joints in cases of eclampsia, whether it is usual to examine patients for such dislocation following delivery.

DR. JANE KETCHAM (closing): In response to Dr. Johnson's question, I think there is no danger of dislocation of the shoulders during delivery in using the anesthetic, but I know of cases where a woman has had dislocation following pulling on straps.

In response to Dr. Bond, in regard to types of presentation in eclampsia—I feel that position has nothing to do with the disease. I have had several cases of breech presentation in eclampsia, and one case of twins where both children were breech presentation with eclampsia. This was a very fulminant case. The woman was six-para and had had eclampsia in the last four pregnancies. She came into the hospital in convulsions and had one after another until death occurred after twenty-four hours.

As has been said repeatedly, this is one of the most dramatic situations that ever occurs in any case. The family is always more or less stirred up; they all think the patient is going to die, and when you add to this terrifying disease, the advice to the doctor is to sit tight and not start in to deliver, it is hard on both the family and the doctor. You should try to control the toxemia before you add to the situation the shock of delivery. Very often the shock of delivery is the last straw, and if you can just sit tight until the overwhelming toxemia is controlled, the obstetric risk is improved for both mother and child.

OPERATIVE INJURY OF THE HEPATIC AND COMMON BILE DUCTS

METHODS OF AVOIDANCE AND REPAIR*

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Kehr, Rio Branco, Descomps, Ruge, Kunze and Pantaloni have, long ago, described practically every type of anomaly of the bile ducts and of the biliary blood vessels. Recently Eisendrath and Behrend have verified these original observations.

Kehr evidently considers these biliary anomalies of considerable surgical importance, since he devotes many pages in his "Praxis der Gallenwege Chirurgie" to their exposition. In particular he emphasizes these anomalies in their relationship to ectomy and as factors in the production of operative duct injury.

The purposes of this paper are to briefly review the more common anomalies of the biliary ducts and blood vessels, to consider the usual types of duct injuries, to describe the methods of repair of such injuries and finally to define the methods of avoidance of these duct injuries.

TYPES OF CYSTIC DUCTS.—I. The so-called classic type of cystic duct is where an acute angle is formed by the union of the cystic and hepatic ducts, and this type is found in 75 percent of cases.

II. The parallel type of duct is that form in which the cystic duct parallels the hepatic for some distance before uniting with it. This parallel type is divided into two varieties: the short parallel variety is where the duct unites with the hepatic duct before the upper surface of the duodenum is reached and occurs in 5 percent of cases. The long parallel variety of cystic duct occurs in 12 percent of cases and is that variety where the cystic duct unites with the hepatic beneath the duodenum.

III. The spiral variety of cystic duct is that type wherein the duct either crosses on top of the hepatic duct or winds beneath it, to enter the left aspect of the hepatic duct; spiral cystic ducts are found in 8 percent of cases.

In the preceding, I have used Eisendrath's percentages since he has studied a large number of cadavers and, by first injecting the ducts with warm bismuth paste and then radiographing them, he has secured a greater degree of accuracy.

(*) Presented with lantern slide demonstration before the Section on Surgery, Indiana State Medical Association, Indianapolis session, September, 1921.

ANOMALIES OF THE HEPATIC DUCTS.—The anomalies of the hepatic ducts are as follows: An accessory hepatic duct may, (a) empty into the right hepatic; or (b) into the main hepatic; or (c) empty into the angle of junction of the cystic and main hepatic ducts; or (d) may empty into the cystic duct. The right hepatic duct may empty into the cystic duct or vice versa.

Other unusual anomalies of the biliary duct system are, a double common duct with a communication between the cystic and main hepatic ducts, or, two accessory hepatic ducts emptying into the gall bladder. (Kehr's cases.)

ANOMALIES OF THE BILIARY BLOOD VESSELS.—In one-third of all cases, the cystic artery has its origin from the common hepatic and not from the right hepatic branch of the hepatic artery. Under such circumstances, the cystic artery crosses on top of the hepatic duct. In 12 percent of cases, two cystic arteries are present, both of which do not necessarily come from the right hepatic branch of the common hepatic artery. Not infrequently, an anomalous artery may originate from the gastro-duodenalis, and run upwards in an oblique direction to the gall-bladder, crossing the common duct in its course. This vessel may be the cystic artery or may be an accessory vessel.

THE VARYING RELATIONSHIPS OF THE HEPATIC DUCT AND ARTERY, THE PORTAL VEIN AND THE COMMON DUCT.—The interval separating the hepatic duct and artery varies from immediate apposition to 25 mm. Not infrequently one overlaps the other. The multiplicity of possible deviations from the supposed normal are so numerous that sufficient space for their description cannot be given in such a limited paper as this.

CLASSIFICATION OF OPERATIVE DUCT INJURIES.—These injuries are here classified as to their time of occurrence, *i. e.*, whether recognized at the time of their production or later. Here I again quote Eisendrath as his is a practical working classification. He has collected 51 cases of duct injuries, due, he states, either to errors in technique or to anatomical variations of the structures concerned.

Eisendrath has classified duct injuries in four groups:

I. Those cases in which the injury was recognized at the time of operation, or shortly thereafter, and immediate repair instituted. This group affords the majority of cases reported—26.

II. Those cases, four in Eisendrath's report, in which an immediate or early repair of the injury was not successful, necessitating a secondary operation.

III. In fourteen cases, the injury was overlooked at the time of the primary operation, a secondary attempt only at repair being made, and this usually for stricture.

IV. Miscellaneous cases; exemplified by such cases as that of Delageniere, quoted by Kehr, wherein accidental division of the ducts, during ectomy, was followed by recovery, or as in two cases of Moynihan's, where the ducts were divided, a split tube inserted and recovery ensued. A further example of this miscellaneous group is the case of Lilienthal, wherein the hepatic duct was ligated, the accident going unnoticed until icterus developed. This patient died.

MODES OF DUCT INJURY.—I. Tear or resection of one or all of the ducts may occur at the site of union, one with another. Undue traction on the gall bladder during ectomy or the placing of a forceps, somewhat blindly on the cystic duct, as in the instance of a large empyema of the gall bladder where it is not desirable to aspirate first, are factors in the production of this type of duct injury. Likewise, the presence of anomalous or multiple blood vessels, wherein vicious hemorrhage ensues from an unexpected source for one reason or another, resulting in hasty and blind but ill-advised attempts at control of such bleeding, make for duct injuries.

II. Tear, division or ligation of the main hepatic or common ducts during separation of the ampulla of the gall-bladder or the stripping free of an adherent parallel cystic duct, can occur. Complete division of the common duct where a spiral cystic duct obtains, may occur, as where a clamp has been applied for any one of several reasons, at right angles to the duct.

III. The common duct may be torn, divided or ligated, due to efforts to control bleeding coming from the depths of the operative field, or the duct may be split in the removal of a stone, which is tightly wedged. A scallop from the wall of the duct may be removed by the application of a clamp to the terminal end of the cystic duct, by making the application too close to the common duct. Efforts to grasp the spurting end of an anomalous artery, originating from the gastro-duodenalis and coursing upwards to the gall-bladder, may result in crushing or ligaturing the duct.

IV. Various anomalies of the ducts being possible and fairly common, it is not particularly difficult to divide or ligate any one of the ducts if due care is not exercised.

METHODS OF REPAIR.—I. The so-called ideal methods of repair are usually not applicable except in recent cases. A. Circular suture, somewhat after the technique of Carrell's blood vessel suture, is perhaps the best procedure. B. A rubber tube may be utilized in circular suture in several ways, thus: there may be made an end-to-end anastomosis of the common duct over the tube, which is allowed to emerge either thru a separate opening in the duct or thru the ampulla of Vater (traversing the entire length

of the common duct). Again, the transduodenal method of Voelcker or Hoerz, wherein an end-to-end anastomosis of the duct is made over a rubber tube which is allowed to emerge thru a separate opening in the duodenum, may be found useful.

II. Incomplete repair may be made by incomplete circular suture, in which the T-tube of Kehr or a plain rubber tube (passed onward thru the ampulla of Vater), may be utilized. In this type of repair, only the posterior wall of the duct can be sutured and a cuff of omentum may be applied at the site of suture for further security.

III. Hepatico-duodenostomy after the technique of Witzel, Coffey or W. J. Mayo may be found to be applicable in some instances.

IV. A flap from the stomach, colon, or cystic duct or gall-bladder (if available) might be employed to bridge the gap in the walls of the duct. This has been done successfully by Kehr.

METHODS OF AVOIDANCE OF DUCT INJURIES.—The special factors of safety are:

I. Knowledge of possible vessel and duct anomalies.

II. Methods of control of unexpected and alarming hemorrhage: (a) finger compression of Pantoloni, by utilizing the forefinger in and beneath the gastro-hepatic omentum, the thumb being applied on top of this structure; (b) avoidance of hasty blind clamping; (c) feeling the vessel spurt against the finger and applying a clamp only after quick sponging of the site of bleeding to clean the field, under direct vision of the bleeding vessel.

III. Aspiration, by means of a fine hypodermic needle and syringe, of any structure, if in doubt as to its identity, *i. e.*, whether portal vein, hepatic artery or the duct.

IV. Ligate or clamp all strands of suspicious tissues (referring here more particularly to anomalous vessels) doubly before dividing.

GENERAL FACTORS OF SAFETY.—I. Ample incisions should be employed so that adequate exposure of the operative field is obtained. Kehr's Bogenschnitt and Wellenschnitt are useful incisions; likewise Bevan's hockey stick incision, supplemented by an additional angulation to the right at the lower end serves well frequently.

II. Proper placing of sponges is important. When possible, a sponge should be placed beneath the foramen of Winslow so as to elevate the structures contained in the gastro-hepatic fold. Masson's method of producing elevation of the liver by the insertion of a sponge pack between the upper surface of the liver and the diaphragm may be found useful. I have no experience with this procedure.

III. Proper delivery of the liver by traction after the plan of Mayo-Robson is of great importance.

IV. Behrend considers the opening of the anterior leaf of the hepato-duodenal ligament and the identification of the supra-duodenal portion of the common duct to be the most cogent factor of safety.

V. The separation of the ampulla of the gall-bladder from the common duct should be done with the utmost caution, followed by the identification and exposure of the cystic, hepatic and common ducts and the cystic artery. Due consideration for the possible anomalies of ducts and blood vessels should be made. The cystic artery should be ligated preferably close to the neck of the gall-bladder and complete isolation of cystic duct and artery should be carried out before such ligation is done, if at all possible.

VI. All other factors being equal, if the common duct is to be opened, the site of election is the supra-duodenal portion.

VII. At all stages of an ectomy or a choledochotomy, it is well to keep in mind the possibilty of an anomaly of either the gall-bladder, the gall ducts or of the biliary blood vessels, being present.

DISCUSSION

DR. H. O. SHAFER (Rochester, Indiana): In removing the gall bladder I dissect it, sometimes split it, and go down to the cystic duct; but I think if we remove all of the cystic duct we may do more harm than if we leave a portion. My experience over quite a few years has not made me want to change that technique. I feel the patient is in better shape and there is less damage done in the abdomen. The ease with which it is done is so much more apparent to me than to clamp off the cystic duct and work up.

One of the things that has worried me in surgery of the badly infected gall bladder is the infection we may get that goes to the liver or the pleura. I have had cases of empyema of the gall bladder which resulted in empyema of the chest by direct continuity.

As to the closure of the wound, I do not think that is the thing to do. I think the cigarette drain naturally takes care of that. I believe also that when we remove a stone from the common duct the best thing is to put in a small tube down to the common duct with a couple of cigarette drains, and these cases get well. Nature does wonderful things toward relieving that bile in the normal way, and if we do not completely sever the common duct nature will take care of it. It seems to me that drainage there is safer than any operative procedure we might do. Further, I might say that I believe in our gall bladder cases, taking them as they come, year in and year out, our mortality is higher than in any other cases. Within the last year I had four ruptured gall bladder cases in the hospital at one time. I do not suppose it will ever happen to me again. In three of

these cases I removed the gall bladder completely. In the fourth with only drainage, gangrene had set in and the patient died from extensive necrosis.

I believe in these cases we must take care of our patients first—remembering that anomalies may get us into trouble, but always playing safe, draining and letting nature do the things which she is always so kindly doing for us.

DR. GOETHE LINK (Indianapolis): In my experience more than fifteen percent of all gall bladder and bile duct cases have required operation upon the common duct; but every one of these cases had, at one time, been strictly a gall bladder case. Therefore, in dealing with a large percentage of common duct cases I was dealing with neglected pathology. There are a number of reasons for this, but let us pass them by saying that we do not operate our gall bladder cases early enough.

A surgeon should bear in mind that fifteen percent of these cases of gall bladder surgery are common duct cases and he should go further in his surgery than some of us have been going. He should explore the common duct more often. It has been definitely demonstrated that frequently we cannot palpate stones in the common duct when they are present. If the common duct is dilated, if there has been jaundice, if there has been leukocytosis and high temperature, the common duct should be opened and explored, and in order to do that we should have knowledge of the very anatomy that Doctor Bonn has shown us so nicely.

The common duct should not only be explored more often, but it should be treated by drainage; the drainage Doctor Shafer insists upon should extend to the common duct. The sphincter of Oddi should be dilated and a T-tube fastened in the common duct. We should have more surgery done in this region which Doctor Bonn has so well elucidated.

DR. B. VAN SWERINGEN (Fort Wayne): I want to take issue with this statement about drainage of the common duct. From an educational standpoint I do not see why anybody wants to drain the common duct. If the operation has been done properly, the common duct will have been cleared of all stones that are in it and drainage through the duct will have been instituted. Then the way is clear for anything in the common duct to be carried along with the bile as it makes its escape into the bowel. To my mind T-tube drainage of the common duct is absolutely worse than useless. It keeps up the nausea after operation, provokes vomiting as long as the T-tube is in there, and also gives rise to considerable distress which amounts to actual pain.

I am not averse, however, to drainage; but not drainage of this duct. I think that is absolutely contraindicated. A tube or drain surrounded by gauze laid in the bed of the gall bladder and down to the common duct is all that is indicated, and that is all that is necessary to insure perfect apposition and closure of the peritoneum covering the gall bladder.

DR. JAMES J. MOOREHEAD (Terre Haute): A few years ago in Chicago, while engaged in research work regarding the duodenum—to determine whether this portion of the gastro-intestinal canal is essential to life—I inspected carefully the biliary tract in a large number of the dogs used in the work. Anatomical anomalies such as have been so well described by Dr. Bonn were occasionally noted.

A complete duodenectomy required transplanting the common bile duct into the jejunum. Following considerable experimentation with other methods we adopted this simple procedure: A jejunal opening was made of just sufficient size to permit the duct to be drawn into the lumen of the bowel by a thread armed with two needles; this tractor was tied 2.5 cm. distally; one sero-serous suture effected closure around the duct. The pancreatic duct was likewise transplanted.

DR. ERNEST I. BRENNER (Winchester): Just one question in regard to the drainage of the common duct. In these cases of common duct involvement we always have a cholangeitis. That means that we have inflammation, and if we have inflammation we must have some obstruction at the ampulla. If that is so, if we do not put drainage into the common duct the inflammation will close off our opening and we defeat our end in that we do not get "free" drainage.

DR. A. S. JAEGER (Indianapolis): We know the question of how best to deal surgically with gall bladder diseases has been under discussion for a long time and probably will be until as long as each surgeon has his individual method of doing his work. The question of whether one should drain the common duct depends on the individual case upon which one is working. Doctor Link favors draining the common duct. So do I, but I know he will admit there are cases he does not so drain because it is not indicated. But I believe everyone will admit that it is not very good to close the abdomen without some form of drainage, whether directly into the common duct or not.

Just so long as most of us refuse to admit that we may have gall stones which do not originate within the gall bladder we will have trouble. Just so long will they operate such cases, the patient recovering nicely from the operation and then coming back after a while complaining of the original trouble. His biliary tract has not been properly drained, for the infection in the bladder is the result of a condition which originated outside the gall bladder, and the effect has been removed but not the cause. Consequently there is sooner or later a recrudescence of the primary pathology.

DR. H. K. BONN (closing): Dr. Van Sweringen says that pain and distress is always present when a T-tube has been used. Yet Deaver reports a patient who has worn a T-tube for three years without discomfort.

I cannot see how a common duct, from which stones and debris have been removed, can be expected to carry bile into the duodenum when we consider that this same common duct must have been somewhat irritated in removing the stones, and that inflammatory changes of some degree will occur, which may block the duct temporarily. It appears to me that a T-tube, properly placed, will carry away the bile and afford the common duct the necessary rest to permit the inflammation to subside. Dr. Link has stated my position exactly in regard to common duct drainage.

In order not to leave a wrong impression, permit me to state that I believe in T-tube common duct drainage whenever indicated. I do not believe in closing the abdomen without drainage after simple cholecystostomy but prefer using a cigarette drain to the stump of the cystic duct as a factor of safety.

LUDWIG'S ANGINA*

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In presenting this subject I make no pretense of having anything original, but wish to review very briefly what has been said in the past about this very grave and often fatal disease, and to report a case which began in a very unusual manner.

We as otolaryngologists should be more familiar with the diseases and anatomical relations of the head and neck and thereby better fitted to treat this disease intelligently.

In Dan McKensie's recent work, *Diseases of the Nose, Throat and Ear,* we learn that "septicemic pharyno-tonsilitis, variously known as gangrenous sore throat, acute cellulitis, acute edema of the pharynx, and perhaps most generally as Ludwig's Angina, is a rare and peculiarly virulent, often fatal, affection of the throat and cervical cellular tissue, characterized by intense and widespread local inflammation, and by profound and often rapidly fatal toxemia.

"It is a form of septic cellulitis or erysipelas of the submaxillary region and neck, secondary to a streptococcic or pneumococcic glossitis. It is characterized by the formation of a hard, brawny swelling of the parts under the jaw, and in the upper cervical region. The floor of the mouth, the fauces, the pharynx, and the larynx participate in the general phlegmonous swelling, and severe constitutional disturbances co-exist. There is grave danger of life from septicemia, from edema of the glottis, and later from exhaustion."

Other English and Continental writers have given us information concerning this condition, with numerous case reports, but in this country comparatively little attention has been paid to it, at least if one may judge from the paucity of the literature. Many text-books by American authors do not even mention it, and during the past ten years only a few scattered case reports have been made public.

There also exists a good deal of confusion in regard to the name itself. Newcomb remarks that it is always unfortunate to attach the name of an individual to a pathological process, for while it may at first serve for more ready identification of the condition, subsequent study is almost certain to modify its clinical significance; and because the name gives neither anatomical nor pathological clew it can easily become both misleading and confusing. In this particular case, the title is unusually inappropriate, for Ludwig of Stuttgart, after whom it was named, was not really the first to publish an account of it. His observations appeared in 1836, but there is a record which leaves no doubt that the condition had been definitely described long before Ludwig's time.

In 1822, Dr. George Gregory published in London an account of the illness, death and post-mortem of one Ann Jones, housemaid, aged 25, who presented, on admission to the hospital, "pains in the neck, with fever and great difficulty in swallowing, swelling and tenderness all about the neck, but especially at the junction of the clavicles with the sternum, from which no essential relief was obtaind by bleeding or purging." The disease progressed rapidly, breathing became so impeded that the tongue assumed a "blue colour", and "to relieve this, blood was twice drawn from the arm, but the alleviation was very momentary". Despite the continued bleeding, the patient managed to survive seven days. When the autopsy was performed, it was found that "the cellular membrane beneath the skin of the throat and around the trachea was everywhere in a state of disease, and the same disorganized condition of the membrane pervaded the whole extent of the anterior mediastinum, even as low as the point of the fusiform cartilage." To this singular variety of quinsy, "Dr. Gregory ventures to apply the term *cynanche cellularis,* from a belief that it has not yet received any more appropriate appellation".

This article makes reference to three earlier writers, Mr. James, of Exeter, in his work on *Inflammation* (p. 188), Dr. Kirkland, in his *Enquiry into the Present State of Medical Surgery* (Vol. 2, p. 159), and Dr. Wells, whose "case of extensive gangrene of the cellular membrane between the muscles and skin of the neck and chest" which he reported to the Society for

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the Improvement of Medical and Chirurgical Knowledge on May 2, 1809. This seems to be the first description of this condition ever published. In his account Dr. Wells informs us that the patient's illness began by her feeling "a pain in her bosom and collarbones and being often chilly. These ailments were attributed to her staying much in a room the doors and windows of which were frequently open". Then "the left cheek began to be painful, red and swollen. This disease of the cheek was at first thought to arise from a bad tooth, but as it increased quickly, an apothecary was sent for. The swelling and redness * * * had now reached the left clavicle and * * * the apothecary conceived that those symptoms depended upon an inflammation of the parotid gland".

Dr. Wells, called in consultation by the "apothecary", was unable to relieve the patient, and she died on the third day after his first visit. After much "reluctance" he gained permission to make a post-mortem examination. "When an incision was made through the skin of the thorax, a very fetid liquor of a dark brown color flowed out, the quantity of which * * * was estimated to exceed half a pint. Upon turning the skin aside, a most hideous sight presented itself, the whole cellular membrane, which covered the muscles upon the fore part and sides of the neck and chest, being discovered to be in a state of gangrene".

The description of these early cases is not very different from the most recently published clinical records. R. W. Parker, in 1879, published an extensive historical resume of what had been writen concerning cellulitis of the neck, or "angina Ludovici" up to his time, and sixteen years later, James E. Newcomb read a paper before the American Laryngological Association, which contained additional collected cases. But during the past twenty-five years, despite the great advance made in all branches of otology and laryngology the literature concerning the condition is very scanty. The most recent authoritative pronouncement regarding it seems to be that of Dr. Halphen who, in 1918, had this to say to the surgeons of the Fourth French Army:

True Ludwig's Angina, very rare, is characterized by the gravity of the general symptoms, the patient being prostrated almost before the pus collection has had time to form. Ludwig's Angina, improper designation (*mauvaise denomination*) of an affection discovered by Gensoul, five years before Ludwig, can be called an angina only because of the extreme anguish of the final period. It is really a hypertoxic form of gangrenous phlegmon of the floor of the mouth, similar in form to a massive gangrene in the course of severe wounds of the limbs, or like that of a suppurative appendicitis. Ludwig defined the condition as a "gangrenous induration of the neck" and enumerated the diagnostic features in this way:

(1) Slight inflammation of the throat itself which even when it is present disappears after a day or two, and which when it persists may be looked upon as of secondary diagnostic importance; (2) a peculiar "wood-like" condition of the connective tissue, which does not pit on pressure; (3) a hard swelling under the tongue, with a bolster-like swelling around the interior of the lower jaw, of a deep red or bluish-red color; (4) a uniform spread of this induration in such a way that it is always sharply bordered by a zone of entirely unaffected cellular tissue; (5) escape of the glands, although the disease attacks their cellular-tissue surroundings and may even commence therein.

It is noticeable that all subsequent writers agree with Ludwig in the first four features, but that there is much difference of opinion in regard to the fifth.

A modern definition from the clinical side is given by Gerster, an American writer: "A phlegmonous destruction of the submaxillary gland, characterized by alarming and extensive dense edema, caused by the unyielding character of the fascial envelope of the gland; which edema is most manifest about the latter's vicinity, *i. e.*, occupies the floor of the mouth". It will be noticed that most of the modern definitions limit the inflammatory focus to the submaxillary gland, while the earlier ones include a much more extensive area.

Thomas (Annals of Surgery 1908) in a very exhaustive article says the location of the submaxillary gland between the posterior border of the mylohyoid and the middle constrictor muscles is responsible for the rapid development of the edema of the glottis in Ludwig's angina, and that the infection is usually due to the streptococcus.

It is noticeable in examining the various case reports, how often the history contains reference to various dental difficulties, which *at first* were thought to be the cause of the cellulitis. Many of the victims were young people between twenty and twenty-five, in whom the eruption of the posterior molars may have been suppressed or have given rise to infection for other reasons. Yet Hamann, writing in 1899, appears to be among the first to state that he believed cervical suppuration to be generally due to such a cause. "*Dental and peridental affections are the most common causes of extensive submaxillary suppurations. Any septic process in the mouth, however, is likely to be followed by lymphatic and glandular abscess.* In one of the severest cases I have ever seen, the infection began in the tonsil. Scarlatinal and diphtheric inflammations may lead to the most serious cervical abscesses, which are at times associated

with sloughing and gangrene. It is probably cases of this sort that Ludwig saw when he first described the disease."

As the glands in the submaxillary region receive the lymph from the oral cavity, they are generally the ones primarily affected. The deep cervical fascia have an important influence in determining the course of abscesses and in directing the spread and extension of inflammatory products; but more than the fascial layers themselves, the spaces or intervals between the various organs of the neck, where the connective tissue is rather lax, allowing mobility of the parts, permit the inflammatory process to extend and the pus to infiltrate the tissue.

The submaxillary gland is enclosed in a rather firm fascial covering, from which fibrous bands extend in various directions. Around it, however, there is considerable loose, connective tissue. When inflammation of the submaxillary gland, or of the lymph glands contained within its fascial investment, occurs, there will be tension on the capsule, and a marked collateral edema of the surrounding parts. As dense tissue surrounds the infected area, the likelihood of sloughing and gangrene is very great while the swelling and inflammatory induration of the tissues may lead to compression of the respiratory passages and edema of the loose, submucous tissue. So, even if the process begins in the submaxillary region, it is practically certain to extend, sometimes as far as the opposite side of the neck.

The previsceral space of Henke lies between the trachea, larynx and thyroid gland, and the ribbon-like muscle in front of them: if an abscess forms here, it may exert pressure upon the air passages and extend into the anterior mediastium. There is a third connective tissue space around the great blood vessels of the neck, upon which lie the deep, cervical lymph glands. An abscess located here will raise the sterno-mastoid muscle, gather between this muscle and the trachea, or possibly descend into the mediastium. Postpharyngeal abscesses may occur in the retrovisceral space behind the esophagus and pharynx;—and, there is still another space at the lower end of the sternomastoid, posterior to which are the great vessels of the neck and the scalene muscles and from which there is communication with the axilla, as well as the space about the carotid artery and jugular vein.

Newcomb describes the symptoms as both constitutional—either sthenic or asthenic type—and local, presenting the following diagnostic points:

(1) A wooden-like induration of the affected region, sharply defined from the surrounding normal tissue; (2) the thrusting forward and upward (by the accumulating inflammatory products) of the tongue toward the palatial vault; (3) severe dyspnea with the attendant danger of laryngeal edema; (4) the presence of a hard pad or button-like swelling at the internal aspect of the dental arcade. All of these occur with general pain, redness, heat and swelling of the cervical region; "that is", the classic symptoms of a phlegmon. Swallowing is painful, if not impossible. Usually, the mouth can hardly be opened, as the muscles performing this function are partly imbedded in the infiltrated cellular tissue and partly participate in the inflammation. This is especially true of the mylohyoid, which, being the muscular floor of the mouth, is raised in deglutition.

The prognosis is grave. Newcomb (1895) gives a mortality of 43 percent. More modern surgical methods and earlier diagnosis have somewhat reduced these figures, but even today the outcome is very often fatal.

Early, free and deep incision, rigid antisepsis and general supportive treatment offer the only chance of cure. Gerster says emphatically, "In angina Ludovici, there is great necessity of early and ample incision. The object is not so much to evacuate pus as to relieve tension." He regards the submaxillary gland as the focus of mischief, and attaches a practically pathognomonic importance to the fact that pressure over the edematous area rarely elicits pain except directly over the gland. Even if the patient is unconscious, such pressure will cause unmistakable signs of distress, and if these appear, there is no excuse for delay. "There being no 'pointing' as in an ordinary abscess; therefore, we must first expose the entire area of the gland. In a typical case, the gland will be found more or less disintegrated, and inside its original connective envelope is ichorous fluid or thin, offensive pus."

There is a form of cellulitis of the floor of the mouth which affects the sublingual region only, which is usually of dental origin. This type of infection may be drained by a free sublingual incision, and oftentimes such cases, if only slight, recover spontaneously. But these are in no sense typical Ludwig angina, as previously described.

A case of this type came under my observation, referred to me by Dr. N. E. Harold. Mr. R., age 39 years, had a molar tooth extracted, which was followed in 24 hours by a swelling in the floor of the mouth, considerable pain, difficulty in swallowing and some obstruction to breathing, the last due to swelling and elevation of the tongue, and upward pressure of the floor of the mouth.

There was no involvement of the submaxillary region. The induration was localized to the sublingual region only and did not at any time extend farther. The patient was sent to the Deaconness Hospital, a free sublingual incision was made under local anesthesia, releasing a moderate amount of pus. On account of

the edematous condition of the sublingual mucosa, drainage was not satisfactory; yet, after two weeks of streptococcic delirium, the patient recovered.

This case would have recovered much more safely and quickly had the incision been made externally through the mylohyoid muscle.

It should be borne in mind that general anesthesia is not safe in such cases, unless one is prepared to do a hurried tracheotomy. Local anesthesia should always be used if possible, and best used with scopolamine and morphine.

The case I wish to report differed from the usual in that the parotid gland was the first to become involved, and from the findings on the first examination (which were a slight ulceration on the gums and the mouth of Steno's duct, and a clearly negative pharynx), led me to believe that the infection in this case extended through the parotid duct to the parotid gland, thence spreading downward, and forward, through the lymphatic channels.

CASE REPORT—Mrs. W. S. H., age 62 years. Family history—Neg. Personal history—No illness since childhood.

On May 23, 1920, the patient complained of a soreness on the inner side of right cheek in the region of the upper first molar, which she attributed to an ulceration she had had on the gums. Two days later she noticed a hard swelling in the parotid region, which rapidly grew worse. About eight hours after the parotid swelling began, I saw the case with Dr. N. E. Harold.

We found a marked board-like swelling of the parotid region, the right cheek, and the submaxillary region—the temperature 102, pulse, 118, respiration 22. Within eight hours the swelling had extended to the floor of the mouth, and almost to the clavical on the same side. The mouth could not be opened, and the tongue was pressing upwards tightly against the teeth. The pressure on the pharynx together with an edema of the glottis was causing very great difficulty in breathing. A diagnosis of Ludwig's Angina was made, and immediate operation advised. Sixteen hours after beginning of the parotid swelling, we operated on her under morphine and scopolamine, ether anesthesia, at the City Hospital as a private patient. A deep incision was made from the lower border of the parotid gland downward and forward, down to and through the deep facia, to the median line, cutting the anterior belly of the digastric, partly exposing the larger vessels, the submaxillary glands, and the submaxillary lymph nodes. Connecting this incision with a deep incision upwards through the full length of the mylohyoid muscle which opened the floor of the mouth and exposed the sublingual glands. The glands were opened and a moderate amount of cheesy purulent material was released. The pressure on the floor of the mouth and larynx was immediately relieved, and breathing became easy. The wound was left open, and dressed with moist boric acid gauze, which was changed every four hours for the first few days. Strych. gr. 1/40 was given every four hours, together with other supportive treatment, under the direction of Dr. N. E. Harold.

The temperature following the operation ranged between 98.6 and 99.8 and after three weeks the patient left the hospital. The wound was entirely healed in five weeks.

There was an interesting feature about the parotid gland in this case, as it sloughed out so completely within five days that the facial nerve could be plainly seen, lying free in the wound.

There was a question as to local or general anesthetic in this case, but with the enormous swelling and extensive incision contemplated, we decided in favor of morphine, scopolomine and ether. We were prepared, however, to tracheotomize at any moment, but such was not necessary.

I have seen within the last few years in consultation two other cases of Ludwig's Angina, both resulting fatally, which I mention only to emphasize what has been said in regard to early and free incision. In one of these cases the incision was insufficient, due to a faulty local anesthesia. And in the other, incision was done under general anesthesia, was free enough but was done too late, I think four days after the onset.

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DISCUSSION

DR. HARRY BOYD-SNEE (South Bend): I recall a case which developed Ludwig's angina as a complication in the course of an acute suppurative streptococcic epiglotitis. The initial primary infection made its appearance as an unilateral inflammatory reaction presenting submucosal edematous infiltration which was definitely limited to the right side of the epiglottis. Within a few hours a destructive superficial ulcerative process supervened which was followed by extension of the infection into the sublingual region manifesting itself clinically as a typical Ludwig's angina. The complication

was treated surgically through an incision similar to that described by the essayist. In spite of the operation performed the disease progressed to a general involvement of the deep structures in the neck on the right side extending into the mediastinal region which condition necessitated a secondary operation. This case came to a fatal termination through general sepsis.

DR. DAVID F. BERRY (Indianapolis): My personal experience is limited to two cases of pseudo-angina. Both recovered without surgery.

I wish to accentuate the necessity for an early diagnosis. If dealing with a genuine Ludwig, insist on immediate operation. Boldness, but not recklessness, in operation. This is no field for timidity. The patient's life depends on thorough drainage established early, with a minimum of shock.

I believe the knife less objectionable than the Pacquelin cautery, as advocated by some able surgeons, for incising the swollen tissues. The cautery destroys tissue far beyond the line of incision and as there is usually extensive destruction of tissue from the infective process, it seems more fitting to avoid adding a complication.

I have personally known of two cases operated under general anesthesia, both resulting fatally. I believe the unhappy results were facilitated by general anesthesia. Local anesthesia is greatly to be preferred.

Henri Aboulker, of Algiers, reports ten cases of genuine Ludwig, five of which he operated under general anesthesia with four deaths. Five cases operated with local anesthesia, all recovered. He advocates the use of 1-200 sol. of novocaine, 1 minim of 1-1000 sol. of adrenalin to each c.c. colored with methylene blue. This enables the surgeon to see, as he dissects, if his infiltration of tissues has been adequate to control pain.

PHYSICAL INEQUALITY OF SCHOOL CHILDREN*

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There is a great difference in the intellectual advancement of school children. Some are naturally bright because of their inheritance and favorable opportunities; others in the same grade progress slowly under adverse conditions. The advancement of the backward children is hindered, in many cases, by correctable causes. The love of study may even be destroyed under the load of physical imperfections. Before the school year begins in the autumn parents of backward children seek the advice of physicians with the hope that their children will advance as rapidly as any in that grade.

There is a close union between parents and their children; whether it is due to associations, to blood ties or to love is a mooted question. The origin of the family feeling is not of much importance as long as both parents and children recognize the relationship, and are dutiful to each other and the state.

Because of their age and previous experiences, parents have a better knowledge than their children of the needs and preparations to meet the battles of life. The correction of physical defects should not be left optional with children. If the young are determined to rule in matters that are detrimental to their future good, they must abide by the consequences, which is very much opposed to the wishes of the parents.

Families are associated very closely and intimately with physicians. All the physical and mental ills are told to the family physician. Much of a physician's work is a mystery to the laity. The lack of human anatomy and physiology may be the reason why so many seek the opinion of those who are familiar with the subjects. This great confidence is an honor and a responsibility that should be appreciated by all members of the profession. To be worthy of this great confidence a physician should always be honest with his clientele, and live the open and honest life of the "Meek and Lowly One".

Parents have a natural interest in the progress of their children. They may even shield them in wrong because of the family pride and parental love. If blind to the errors of their children, the court accomplishes most when the judge administers the mantle of charity instead of the iron rule of censure.

In children who are mentally defective, mothers do not generally recognize the lack of mentality until it is pointed out to them. Normal or slightly abnormal children look and act the same until they are from two to five years old. Cases of myxedema or imbeciles may show their mental defectiveness earlier. Parental devotion is real; the great motherly love of which poets sing is normal. The same is true in the lower animals; many a mother will defend her offspring against enemies rather than save her own life.

To recognize the love and intense interest that parents have for their children is to acknowledge the ideals and desires that parents want their children physically fit when they enter school. Teachers and officers of the law tell us that children who are physically normal do better work and are more obedient than those who are physically defective. Many children are outdistanced in school work by their inferiors because of some physical hindrance that could be corrected easily. Children are born with

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different abilities; the laws of eugenics are uncontrollable, but descent is not the only consideration. I acknowledge that inheritance is the power that can drive the world, and that all stock can be improved by correct breeding, but this paper refers only to physical unfitness, to acquired imperfections, and not to inheritance. As good blood may become impoverished by avoidable infections, so good qualities may be submerged by physical unfitness.

An educational propaganda along the line of physical inequalities has been carried on by lectures, magazine articles and the daily papers. There is no real law or ethics that opposes such movements, yet there is a so-called "gentleman's law" that frowns upon anything along the line of medical education to the laity. It is unethical to entertain anything along the line of quackery, and perhaps the medical profession considers all educational propaganda by the various magazines and dailies as quackery. We, as a profession, may be right in our opposition, but the changes that have taken place in the attitude of the public would indicate that we are losing ground. The tide of professional opposition has been battered down by the advocates of better hygienic surroundings and better manhood. It is evident that the opposition cannot stop the propaganda of better children, better mothers and better men.

There are enthusiasts *in* and *out* of the profession. How much and what to teach the laity is an unsettled question. Ten years ago no one would have attempted to teach sex hygiene in our public schools, yet it is being practiced today; and besides, the laity is being taught many other things that may be detrimental in the future. The opposition may allude to acts of indiscretion due to the educational propaganda; but even this may be displaced by *good*, which generally predominates. Statistics ten years hence will tell whether the state has progressed or retrograded.

In 1900, before the Indiana State Medical Association, I read a paper on "The Evils of Mouth-Breathing". In that paper I stated that about 30 percent of the population breathed through the mouth, and that *man* was the only animal that had acquired the habit. It was also shown that mouth-breathing caused many disagreeable symptoms and pathologies, such as lack of proper aeration of the blood, causing anemia; interference with natural drainage of the sinuses of the nose and ears; interference with the recovery of all continued fevers, as typhoid, pneumonia, etc.; and most sore throats. The conditions have improved very much, but there are still a few correctable causes.

The class with deformed jaws and nose baffle the skill of surgeons and dentists. The condition was caused by inheritance followed with mouth-breathing. Many of these cases can be avoided by following the advice of the welfare stations and teaching parents that it is possible to educate away from inheritance, if begun early. Thus, in the distant future, there can be no nasal or oral deformities because the mouth and nose will be ideal. Twenty-five years ago, parents, teachers and many physicians believed that nasal respiration was not essential to good health. At that time from one-fourth to three-fourths of the pupils in each school room were afflicted with some physical defect that might have been corrected, if the family physician had given his consent. Hence, the educational propaganda that has been going on without the assistance of the family physician. Physicians, teachers and parents agree that pupils should be physically fit for school work and that all pupils should be given an opportunity for mental as well as physical development.

It is supposed that those in charge of welfare stations, and physicians in general, have the ability to tell the intellectual status of all children brought to them. It is not right nor honorable to make parents believe that their offspring is normal when they are mental defectives. The time, energy and money spent upon morons is wasted. Limitation of time in this paper will not allow even a suggestion, or remedy. Most errors by parents or teachers are made through ignorance of the subject. It may not be universal, but it is a safe rule—remove the cause, and nature will correct the pathology.

The intelligence of a community can be measured by the number that are wearing glasses. This can easily be verified by visiting any old college town. The eyes of school children have been shamefully neglected because only *twelve* out of one hundred are born with normal eyes. The errors of refraction exist, even if glasses are not worn. Will the discussants please explain? I have seen children who were kept out of school, assigned to a dark room, taking medicine (internal of course) for anemia, when a pair of glasses cured them. It is easy to remember that 88 percent of all eyes are too short, or too long or are irregular in curvatures. Nothing will correct such a physical defect but a pair of glasses. It is unfortunate to the children of school age that they must suffer for the errors, misunderstandings and superstition of their parents. Many are of the belief that glasses make one old, that the wearing of glasses compels one to always wear them. Glasses not only makes the wearer younger, but they act as a tonic to the eyes. Will the discussants please explain?

For convenience, the physically unfit are divided into the rich, the intermediate class and the poor. There should be a distinction between the worthy and the unworthy poor, because the deserving poor are generally a fine class, having

clean and pure blood, but unfortunately financially poor. There are not so many defectives among the rich because their children are well nourished, being an argument in favor of the malnutrition supporters. The children of the rich may suffer from excessive protein diet, causing irregularity in school attendance. The middle class is composed of our best citizenship —they are the bulwark of the nation and state, and should be physically normal. The poor—well, if this class is divided into the worthy and unworthy, I will gladly give my time to the former, but the latter, which make up the shiftless, uncertain and dishonest, are not worthy of scientific attention. Will the discussants please tell what to do with them?

We are not responsible for our existence, nor are any of the children in or out of school. It matters not to which class the parents may belong, if a child is physically crooked it should be made straight. Human passions are animal passions. Intermarriage may improve stock, as given in Plato's Ideal Republic; but eugenically speaking, the *desideratum* is not always reached, as illustrated in the mentality of our United States senate.

Money is essential to a livelihood, but the greatest pleasure in any of the branches in the practice of medicine is the gratitude of one's patients. To correct physical defects in the poor, and make them physically fit for school, and see them, by their own efforts, passing to the middle or dependable class, is certainly a pleasure, and compensates for all gratuitous work. If in the discussion of this subject means can be reached by which the poor of a community can be made physically fit for school work, and the teachers can cause a regeneration of previous mental impulses by instilling "pep" and ambition into those same delinquent patients, it will enhance the future good of the medical profession with more cash and fewer book accounts.

ADDENDA:—Most diseases are due to infection. It matters not whether the trouble lies in the teeth, tonsils, ears, eyes, heart, alimentary canal, kidneys or elsewhere, to be efficient for school work all physical defects should be corrected. Malnutrition may not be a disease, but the schools of the state have demonstrated that it can be cured with pure milk and hygenic living. Physicians and nurses will have the gratitude of future generations for their good work. Nurses would do well to advise the correction of defects at the beginning instead of at the close of the vacation. Nurses and family physicians need not be so positive in their assertions to parents and children. They are not expected to know as much on refraction as the ophthalmologist, nor of the nose and throat as the rhinologist. A little consideration of the specialist's opinion will not affect their standing with their families. To make children fit for school is to put them all upon the same equality. If all physical hindrances are corrected, the system will reconstruct because it constantly tends towards the normal.

Some physicians assert, "The doctor who depends upon iron tonics to overcome anemia; who uses sprays for chronic nasal catarrh; gargle for sore throats; internal medicines for rhinitis; who prescribes a dark room for sore eyes; who gives powders or pills for headache; who smokes into an ear for earache; who puts fresh beeksteak upon erysipelas; who prescribes cough medicines for a cough; who prescribes Lane's tea, or its like, for constipation; who prescribes diuretics for incontinence—in short, the doctor who is not 'up' on everything that pertains to medicine and surgery should prepare himself, or the public, as it is being educated, will consider the profession antiquated and not informed upon scientific medicine."

To throw oil upon the troubled waters, there are occasions when medicines are indicated. Patients at least get well from taking medicine, or in spite of the prescription. These laboratory men have surely thrown something into our quiet camp that smells. It is up to us to remove the same or prove its falsity.

DISCUSSION

DR. ADA E. SCHWEITZER (Indianapolis): Studies made by the Division of Child Hygiene upon the physical and mental status of children in our public schools show that children are frequently classed as retarded or defective mentally who after the removal of some physical handicap progress rapidly in the school curriculum. Although considerable attention has in recent years been given to the removal of defects of school children there still remains a large number who have had no especial attention given to health. Some of these children are vigorous and capable. Others are anemic, lack vitality and are unable to make satisfactory progress. The welfare of the latter class should be a sufficient incentive to regular and systematic health inspection of the children.

Among the causes of physical inequalities, we discover heredity, environment, malnutrition, habits and acquired defects.

Some children progress well along certain lines, but lack the ability to comprehend certain types of instruction. Nervous instability manifesting itself in the lack of coordination and failure of concentration is a defect which hinders the progress of many children. Children may inherit also physical deformities which make them inferior to other children because of the impossibility of certain kinds of activity.

The home atmosphere should be fresh and clean, both from the sanitary and social standpoint. Children do not thrive well in bad air or under unwholesome normal conditions. Quite

often a child's lack of progress at school may be traced to closed windows, to insufficient sleep, to incorrect habits of diet and exercise.

Probably the most talked of defect is poor nutrition. However, so many different standards have been used by persons who have set out to determine whether or not there are poorly nourished children in our schools that we are compelled always to ask the basis of the judgment. Even when we find children below weight for height we must know the reason for underweight. The reasons for underweight are many. It frequently happens that the child without regard to his social status is poorly nourished because he gets too little food or because he is not getting a well balanced diet. The pampered child of the rich parent is quite as likely to be poorly nourished from these causes as the child of the poor parents. In the case of the poor child, it is necessary to supply suitable food. An endeavor to do this in the case of all poorly nourished children has resulted in the establishment of milk lunches in a large number of our public schools. These, however, should be adapted to the conditions found. There are instances where they fail to give the desired results from the nutritional standpoint and these failures are potent arguments for a complete physical examination of the child and an investigation of his habits and history to determine the cause of poor nutrition.

Remedial defects should always be given attention before the child starts to school. Inability to measure up to correct standards of vision should mean a visit to the oculist. One authority states that 95 percent of school children have defective teeth. In our own work, we have found an average of two dental defects to every child. Some children are born defective in the mineral salts which are necessary to healthy teeth. Other children whose teeth originally are sound allow them to become defective through lack of care. Regular inspection of the teeth two or four times a year by a competent dentist, together with the correction of any defects found, would greatly improve this deplorable situation among our school children.

Among the acquired defects we find that we may trace many of them to neglected colds and other acute infections all too common in early childhood. If parents could only realize the many evils that follow in the train of these infections there would be no child willingly or willfully exposed to any of them. Frequent among these defects are poor hearing, enlarged tonsils, adenoid growths, chronic nervous irritability, inadequacy of heart valves or heart muscles and often chronic rheumatism and chronic colitis. Any of these physical defects will make the child possessing it less able to compete satisfactorily with his fellows.

Much greater interest and activity must be shown both by physicians and by lay persons before we shall even ameliorate these conditions. To get back to the original causes of many of them, we must begin with the education and the better scientific care of the expectant mother. The specialty of obstetrics must rank in importance with the specialty of surgery. The proper care and nutrition of both mother and child must in some way be provided for. As the writer has said, "That civilization is delinquent which neglects the best interests of its children."

DR. GEORGE V. CRING (Portland): I think that this subject is of extreme importance and the inequalities have been very well presented in detail by Dr. Spohn and Dr. Schweitzer, but it is one that has received far from the attention it deserves from the medical profession, and the practical side of it should be considered more seriously. I cannot see how any man having the education Indiana demands for a medical license would question the possibilities of great good and benefit to the individuals and to their respective communities from the medical examination of school children. Everyone surely must admit the existence of the inequalities and the desirability for correction. The recognition of defects, their correction, and the benefits and degree of perfection desired to be attained will vary greatly in different localities, depending upon both the professional and the lay education along health lines. The time is past when it is sane to think that all physicians have equal knowledge or ability or that they possess the same professional sincerity and moral consciousness which will lead them to do even the best they can under the existing circumstances.

Medical school inspection is not a fad nor an innovation but has been practiced for about thirty years or more. That it is not more popular and more successful does not count against it for the same holds true of modern medical science and I believe the same influences check its advance. What these influences are cannot be discussed in a few minutes, but are certainly worth the consideration of the Society. One of the greatest of these influences, I believe, is the lack of popular knowledge of conditions which call for the help of a medical adviser, and another, the knowledge of what constitutes or characterizes a capable and dependable physician.

I was interested to read in a recent number of the *Journal of the A. M. A.* the following extract which I think has considerable bearing upon this subject: "The Public Health Officer must sell the idea of the use of the practitioner for physical examinations and medical supervision as a means of preventing disease.

"It behooves the A. M. A. to have the largest concept of its responsibility to the public and the physicians at large in the matter of prevention. The science of medicine is today, perhaps, from five to ten years in advance of its general application. The A. M. A. is giving

the widest recognition to scientific advancement but it is not, I believe, pressing as energetically as it might for the wider application of the knowledge already at hand."

And also the following editorial in our last *Indiana State Journal*: "The success of the quacks and irregulars depends upon advertising, but even advertising would not have helped them if the regular medical profession had not failed to acquaint the public with the truth concerning scientific medicine. In reality, we have been too ethical in the sense that we have not taken the public into our confidence but have reasoned that the public ought to have sense enough to know that education, experience and training counts for more than ignorance, inexperience and no training."

The ideas that I wish to emphasize in this discussion are these:

1. It is to be taken for granted that these inequalities exist, are largely capable of correction and it is the general desire to have them corrected.

2. That in our medical school examinations we have the opportunity of discovering them and demonstrating their importance to all concerned.

3. That medical school examinations also afford a splendid way of (1) disseminating a popular knowledge of conditions which call for the help of a medical adviser; (2) of teaching the use of the practitioner for physical and mental examinations and medical supervision as a means of preventing disease; (3) of teaching what constitutes a capable and honorable physician; and (4) of advancing medical science by a better knowledge of the normal and its deviations.

However, to accomplish all these the medical examinations must approach as nearly as possible the ideal of the modern medical science as practiced in our best teaching hospitals and must not be of the type of inspection and propaganda of the poor medical practice and of the quack and charlatan who without education or equipment claims to be able to diagnose and supervise health conditions without a thorough examination of the individual.

I wish to commend the work of the child welfare department of the State Board of Health as Dr. Schweitzer is putting into practice the best of today's knowledge and raising the standard of work done in this line in the state in the counties visited.

DR. A. W. BRAYTON (Indianapolis): Dr. Schweitzer is doing great work and anything that is doing good work for the children should be upheld. I believe a child's education should be thought of as soon as the child is born. It should be followed until he has gone as far as he is capable of going, or as far as his people are capable of pushing him. I urge upon you each and every one to do all you can to get your children as far as you can in the higher realms of education. Without it this government would not be what it could be or should be.

DR. GEORGE W. SPOHN (closing): I do not believe there is any use in squandering money on children unless they have ability. Let them have ability and then spend money; otherwise not. Practically every school in the city has a room and some three, or four in a department for defectives. Thank fortune, my children are not in that group—but if they should be I would wish them to take the place where they belong. It is impossible to get away from inheritance.

Dr. Schweitzer is to be commended for her work. Not many in the state would give up their time for such small pay. It is a pleasure to correct physical defectives. Dr. Schweitzer and her nurses will reap their rewards hereafter.

SERUM PROPHYLAXIS OF MEASLES

The injection of serum obtained from donors was tried out during a recent epidemic of measles of moderate severity, in Rochester, Minnesota, and the results are reported by Morley D. McNeal, Rochester, Minnesota (*Journal A. M. A.*, Feb. 4, 1922). The donors were free from tuberculosis and syphilis, and had passed through fairly severe attacks of measles, without complications or sequelae. They were bled after an interval of five, seven or nine days from the disappearance of the fever. The serum was bottled in amounts of 6 c.c., preserved with 0.01 percent tricresol, and kept in the icebox until used. After varying periods following exposure, sixteen recipients were given 5 c.c. of the serum, injected into the muscles of the thigh. None of the children had ever had measles, although they had come in intimate contact with patients during the contagious period. Four of the sixteen developed an extremely mild type of measles, but no complications or sequelae. In three of the four patients, the incubation period was lengthened to nineteen days. Twelve children remained free from measles. One child contracted measles two months after successful inoculation; this suggests that the immunity does not persist longer than sixty days in some cases. The method recommends itself most highly for the prevention of measles during the period of danger, between the ages of 5 months and 6 years, in tuberculous children and in those physically below normal. In institutions in which large numbers of frail children are intimately associated, the procedure would be of great value.

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EDITORIALS

USE AND ABUSE OF VITAMINES

There probably never was a valuable scientific fact established through careful and accurate research work, medical or otherwise, which was not trailed in a remarkably short time by its abuses. Sometimes these untoward results were in the form of personal calumnies heaped upon the discoverer of a new scientific fact but more commonly the abuse takes the form of shrewd attempts to commercialize upon the philanthropic efforts of truly scientific investigators. There is very justly a taboo upon that medical man who refuses to divulge to his confreres any valuable discovery or information into which he has come, and yet no sooner is it announced than some (or many) powerful commercial organizations grab at the new opportunity to reap fresh financial gains therefrom. True enough, many pharmaceutical houses are willing and glad to aid the medical profession in the proper elucidation of a new product, with the elimination of the chaff from the wheat, but many are proverbially willing to sacrifice scientific fact for pecuniary returns.

So it is with the recently developed vitamines A, B, and C, and one cannot help rejoicing at the lie given to certain manufacturers' claims by the experimental studies of a group of proprietary vitamin products by Hess, Morre and Calvin[1]. Antiscorbutic studies were made upon guinea pigs, with three commercial products, metagen, vitamon and a product containing dried orange juice and dessicated pig's liver. Studies on the antineuritic, water soluble vitamin B were made with pigeons. From their work these investigators concluded that while the process of manufacture and subsequent aging of the concentrated vitamin products did not cause as much deterioration of the antineuritic as of the antiscorbutic properties, yet all the products were very low in antiscorbutic qualities. That all the known vitamins can be prepared for dispensing in a concentrated form which will be unaffected by drying, aging and oxidation, is, in the minds of those investigators, open to question. In fact they believe, with other students of the question, that, except to meet specific indications, as in times of famine and certain economic upheavals, such as in war, the best method of obtaining sufficient vitamins is through a proper selection of foods—in other words, from the dairy, the grocery, and the market, not from the drug store. Among the more potent antiscorbutic foods may be mentioned spinach, turnips, cabbage, tomatoes and the citrus fruits. Likewise the apple and the banana have strong antiscorbutic properties, the latter being especially adaptable since, in this country, at least, it is almost invariably consumed raw and not subjected to such degrees of temperature as needed for canning or dessication, with the consequent reduction in the amount of the antiscorbutic vitamin.

(1) Journal A. M. A., May 13, 1922, pp. 1441-45.

X-RAY AND CLINICAL FINDINGS IN NORMAL CHEST

(OF CHILDREN SIX TO TEN YEARS OF AGE)

The National Tuberculosis Association has completed some research work that is of much value in increasing our practical knowledge concerning the findings in the chest of normal children up to ten years of age. This knowledge is of particular interest in connection with our study of tuberculosis. In order to establish the x-ray and the clinical finding in a normal child up to ten years of age, three groups of well-known roentgenologists and clinicians were selected. While the value of roentgenography in determining the presence of pulmonary disease has long been recognized, yet much difference of opinion exists in the interpretation of findings, largely because no set observations have been made establishing the variations that may occur in the normal. To one observer, shadows noted are indicative of disease, to another they are not evidence of a pathological process; to one they represent lesions of clinical significance, to another they suggest changes of no moment. It is with a view to correcting these shortcomings that the research committee undertook its work, and an appropriation of twenty thousand dollars was set aside for the expenses of the work. After many months of independent work the members of this research committee in considering the chests of normal children between the ages of six and ten years exchanged conclusions that disclosed almost a unanimity of opinion.

In all, over five hundred children were examined. All children who showed signs of disease were excluded from the series. Individuals from various strata of society, foreign and native born, residents of urban and rural communities, school children and children residing in institutions, children exposed to tuberculosis and some without a history of such exposure, children with and without a history of

previous infectious diseases, all symptom free and all of an approximately normal weight and height for their ages were studied. A history of each individual was recorded and in making the examination of the chest care was always observed to have the child relaxed and to see that no cramped or unnatural posture was assumed, for, as is well known, faulty position may lead to findings that cause confusion in interpretation. In addition, a tuberculin test was made on every child. The clinical data were then assembled, and after the roentgenologist had interpreted his plate independently, the clinical and roentgenographic findings were correlated.

The facts detailed seem to indicate that clinically the ideal normal child is a hypothetic impossibility. Children apparently healthy, symptom free and active, show on careful examination many deviations from fixed standards; variations that must be interpreted as within physiological limits. The studies reported warrant the following conclusions:

(1) The data obtained on percussion and auscultation of the lungs of normal children show wide variations from a fixed standard. These variations are usual and are considered to be within normal limits.

(2) Inasmuch as the changes referred to are dependent often upon alterations that persist as the residua of past infections of the respiratory tract, it is obvious that a careful anamnesis, with special reference to all infections, is necessary if diagnostic errors are to be avoided. Even a history carefully taken is often unreliable, as minimal infections are soon forgotten by many and among the unintelligent classes even more significant indispositions are not readily recalled.

(3) Failure properly to evaluate these deviations from a fixed standard will often lead to the unwarranted diagnosis of disease and to even less justifiable treatment.

(4) With a proper appreciation of the widest variations that the normal may present from the ideal, the informed clinician is better able correctly to understand the findings of the roentgenologist, and each, cooperating with the other, is less liable to error.

(5) D'Espine's sign as indicative of enlarged tracheo-bronchial lymph nodes is of little value.

(6) Recognition of and familiarity with the foregoing data is of cardinal and practical importance to every patient, potential and established. Without a proper appreciation of the facts set forth, no intelligent differentiation between a normal and an abnormal respiratory tract can be made.

THE ST. LOUIS SESSION OF THE AMERICAN MEDICAL ASSOCIATION.

The annual session of the American Medical Association held at St. Louis last month was notable in many respects. First, there was a very large attendance; second, the scientific work was of a high order; third, the Association, through its House of Delegates, accomplished much that is in the interest of the welfare of the individual practitioner.

The sections were well attended, some of them even being crowded, and the papers as well as discussions were of a high order of merit. An elaborate scientific exhibit, the best ever given by the Association, attracted much attention. Even the exhibitors made a special effort to show the effects of advancement in their several specialties, and some of the exhibits were of real scientific merit, especially those which showed the late advances in the use of roentgen and light therapy and the use of electric devices as aids in diagnosis.

In the House of Delegates much attention was centered upon the reports of the various councils and committees, and no little interest was shown in quite a large number of resolutions pertaining to State Medicine, vivisection, revision of the "code of ethics", and abolishment of political hospitals.

Among some of the important resolutions was one recommending that county medical societies be encouraged to make public declaration that their members are prepared and ready to conduct periodic medical examination of persons supposedly in health, it being understood that the indigent only shall be examined free of charge and that all others are expected to pay for such examinations.

Another resolution recommended the establishment of a bureau for consideration of legislation and medico-legal problems in which the whole medical profession may be interested. It will be the function of this bureau to coordinate the activities of the several constituent state associations, to ascertain and crystallize the opinions of the medical profession, and to represent the American Medical Association. In all probability this bureau will have Washington as its headquarters, though it may be considered advisable to have the bureau operate from the home office in Chicago.

The Shepherd-Towner law was branded as a product of political expediency, not in the interest of the public welfare but an imported socialistic scheme which unjustly and inequitably taxes the people of some of the states for the benefit of the people of other states for purposes which are lawful charges only upon the people of the said other states. The law was disapproved as a type of undesirable legislation which should be discouraged.

Of much interest to the medical profession and even the public is the resolution on the

Volstead Act which declares that the American Medical Association, representing a membership of over eighty-nine thousand physicians, appeals to the Secretary of the Treasury and to the Congress of the United States for relief from the present unsatisfactory conditions and recommends that provisions be made for supplying bonded whiskey *for medicinal use only* at a fixed retail price to be established by the government.

Concerning vivisection the Association went on record as endorsing the "open door" policy on the part of all institutions carrying on vivisection for research work, which in reality means the admission of properly endorsed and responsible officers of humane societies for the purpose of observation of such research work.

On the recommendation of the Judicial Council an amendment to the constitution covering the question of medical ethics was adopted. The amendment is as follows:

"Solicitation of patients by physicians as individuals, or collectively in groups by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. That does not prohibit ethical institutions from a legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste, or local custom, and sometimes of convenience, is not *per se* improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulating such cards. It is unprofessional to promote radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of diseases; or to employ any methods to gain the attention of the public for the purpose of obtaining patients."

A number of resolutions concerning State Medicine were offered for adoption and finally the House of Delegates passed the following:

"The American Medical Association hereby declares its opposition to all forms of 'state medicine' because of the ultimate harm that would come thereby to the public weal through such form of medical practice. 'State medicine' is hereby defined for the purpose of this resolution to be any form of medical treatment, provided, conducted, controlled or subsidized by the federal or any state government, or municipality, excepting such service as is provided by the Army, Navy, or Public Health service, and that which is necessary for the control of communicable diseases, the treatment of mental disease, the treatment of the indigent sick, and such other services as may be approved by and administered under the direction of or by a local county medical society, and are not disapproved by the state medical society of which it is a component part."

The selection of San Francisco as the place for holding the 1923 session, while representing the majority vote of the House of Delegates, was not satisfactory to a respectable minority that preferred Atlantic City. However, as the California medical profession seems to be having a hard fight against the pseudo-medical cults, it was thought that the moral support given by the great American Medical Association in holding its next annual session on the Pacific Slope is justified.

The selection of Dr. Ray Lyman Wilbur as president of the Association meets with general approval.

DIVISION OF FEES

There is no question but that division of fees under one guise or another is practiced by a considerable number of Indiana physicians, and it is surprising how some men can ease their consciences by making the plea that they are paying for the services of assistants (the referring physician) or merely collecting fees for others. In a few instances the surgeon or specialist makes no pretence of covering up his practices and freely admits that he is paying to get business. In fact some surgeons frankly state that in order to get business they are forced to buy it by commissions. On the other hand, there are enough general physicians without moral stamina sufficient to guide them along ethical planes who unhesitatingly say that they take their patients where they can get a "rake off."

This whole subject has been argued so much that little more can be added. The division of fees in any guise is a species of dishonesty which should not and will not be practiced by those who desire to be conscientious as well as ethical in the practice of medicine. The general physician is entitled to just compensation for any services that are rendered, and all too frequently he is illy paid, but not once in a thousand times is any one to blame but himself because he is not adequately paid. If he will not place a proper estimate upon the value of his services he cannot expect the patients to do it for him, and it is an admission of weakness to ask the surgeon to fix fees for him. In reality much of the division of fees as ordinarily practiced is not a recognition of the value of the services rendered by the referring physician but a bribe to insure further business. We have even heard it said that there are certain physicians who give ministers twenty-five dollars for every major surgical case referred, and the

wonder to us is that the same surgeons do not have paid agents out soliciting business.

The American College of Surgeons and practically all of the state medical associations have taken a decided stand in opposition to division of fees in any form, but despite all this opposition the practice has not been wiped out, though we are satisfied that it is more limited than it was a few years ago and more largely confined to a class of physicians whose standing in good medical circles is seriously questioned. Just at the present time we are interested in an amendment to the constitution of the Kentucky State Medical Society which says that no physician may become a member of any one of the component county societies of the Kentucky State Medical Association unless he shall sign and keep inviolate the following pledge:

"I hereby promise upon my honor as a gentleman that I will not, so long as I am a member of the Kentucky State Medical Association, practice division of fees in any form; neither by collecting fees from others referring patients to me nor by permitting them to collect my fees for me; nor will I make joint fees with physicians or surgeons referring patients to me for operation or consultation; neither will I in any way, directly or indirectly, compensate anyone referring patients to me nor will I utilize any man as an assistant as a subterfuge for this purpose."

In commenting on this the bulletin of the American Medical Association says that it may be questioned if this pledge imposes any more binding obligation upon the society member than does the oath to which he is supposed to have subscribed when he became a doctor. It is doubtful if the piling up of additional pledges will have much deterrent influence on the man who will do things that are clearly wrong. In fact, the doctor who has a screw loose in his moral make-up will not be deterred from the practice of division of fees no matter how many pledges he signs. He has no hesitancy in signing and breaking a pledge, for his conscience is elastic enough to cover any breach in his ethical or moral conduct. The Indiana State Medical Association went on record as opposed to the division of fees under any guise, but we venture to say that the action taken, while crystallizing sentiment against a pernicious practice, has not been the means of stopping it, though we believe that increasing knowledge of the public concerning the matter has had a tendency to lessen appreciably the practice, and it is this latter factor which is going to solve the question eventually. When the public gets fully wise to the fact that their ills, for the most part, are being bartered to the highest bidder, with little or no respect for quality or character of the services rendered, we can depend upon it that the division of fees will come very near to being wiped out entirely.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

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Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

PHYSICIANS generally will approve the publication of a lay medical magazine by the American Medical Association. Authorization of this project was given by the House of Delegates at the St. Louis session. The object of such a magazine is to give the public dependable knowledge concerning the health and how to care for it.

THE annual dues to the American Medical Association may be reduced if in the judgment of the board of trustees such reduction is justifiable. It is very evident that such a move was contemplated when the trustees urged the adoption of a resolution by the House of Delegates giving power to change the amount of the annual dues so that they shall not be less than five dollars nor more than six dollars per annum.

IN the death of Dr. J. N. McCormack of Louisville, Ky., on May 4, the medical profession loses one of its most prominent members, and one who probably has done more for public health work and the highest ideals of medical practice than anyone in the country. He not only served his own state for a great many years in public health work but for a number of years he was actively identified with the American Medical Association in many important capacities, not the least of which was his service in traveling widely throughout the United States in establishing an approved form of medical organization. In fact it may be said that his entire life was devoted to constructive work in the interests of public health and the higher aims and objects of the medical profession.

DR. JOHN A. WYETH, the well-known surgeon in New York City, died suddenly of heart disease on May 28th at seventy-seven years of age. Dr. Wyeth was not only a noted surgeon and the author of a text book and numerous

monographs on surgery but was a conspicuous figure in the development of American medicine. He was president of the American Medical Association in 1901, and has been honored a great many times in other ways by the medical profession. Indiana physicians have cause to remember him for the notable address delivered at the first South Bend session of the Indiana State Medical Association, where he was presented with a silver loving cup in appreciation of his talents and the very warm friendship that he held for a very large number of Indiana physicians,—a friendship that continued to his death.

IN the Hygienic Laboratory of the U. S. Public Health Service, during the last three years, examination has been made of all of the lots of commercial arshpenamin and neo-arsphenamin manufactured in the United States to note deterioration. In no instance was a lot of arsphenamin encountered which could be definitely said to have deteriorated, whereas a rather large percentage of the lots of neo-arsphenamin were found to have deteriorated since their first examination. Therefore, the following conclusions have been drawn: 1. That commercial neo-arsphenamin is a relatively unstable substance in the ampule. 2. Temperature is a potent factor in causing its deterioration. 3. It is advisable to keep it under storage conditions similar to those required for vaccines, until all the factors concerned in causing the deterioration of the compound are understood.

THE new president of the American Medical Association is Dr. Ray Lyman Wilbur, president of Stanford University. At St. Louis some objection was raised to the selection of Dr. Wilbur as president in view of the fact that for several years he has not been actively engaged in the practice of medicine. However, it should be remembered that from 1899, the date of his graduation from medical school, up to 1916 he not only was engaged in active medical practice but in teaching successively physiology and medicine in the Cooper Medical College and later the medical department of Stanford University. Since 1920 he has served on the Council on Medical Education and Hospitals of the American Medical Association and has shown conspicuous administrative ability and a gift for leadership. He has shown especial interest and sympathy with the problems of the general physician.

THE Muncie session of the Indiana State Medical Association should be a very successful one. In the first place, Muncie now has a live medical profession, showing unusual progressiveness and a spirit of harmony. The meetings of the Muncie Academy of Medicine are becoming rather famed because of their excellence and attendance from far and near. The coming session of the State Association should offer a scientific program second to nothing that has preceded it. Those who contemplate presenting papers should get in touch with the program committee at once. The final program will be published in the September number of THE JOURNAL. The *preliminary* program will appear in the August number. With our splendid Indiana roads, and now days every doctor owning an automobile, it is quite possible that a large percentage of those who attend the Muncie Session will enjoy going by automobile, though Muncie is not difficult to reach by railroad from most every section of the State.

WHEN we talk about grafts and foolish legislation we point with pride to Indiana's automobile headlight law. On the first of this year every automobile owner in Indiana was required to purchase and put on his automobile special headlight lenses. Of course these lenses cost from three to ten dollars per pair, and but a few manufacturers were able to comply with the requirements so very naturally they have enjoyed a nice income as a direct result of the law's exactions. It is barely possible that a fairly strict enforcement of the law would make us appreciate it, but, so far as we can see, there isn't a particle of effort made to see that automobiles are supplied with the required lenses or that the lights are focussed properly. In consequence we are troubled as much by glaring headlights as ever before. In fact, to the casual observer, absolutely no improvement in conditions can be noted. Thus we offer the query as to why the people of Indiana are made subjects of such fool legislation which apparently has benefited no one but the lens manufacturers.

THE *Journal of the American Medical Association* had net earnings of two hundred fifty thousand dollars during the year 1921. That is a tidy profit, but the funds are needed for carrying on the various projects inaugurated and supported by the Association. In fact, it is surprising how many activities of an exceedingly valuable nature to medical profession as well as public are carried on under the patronage of the American Medical Association. For instance, the work of the Council on Pharmacy and Chemistry in its splendid efforts for rational therapy has made its influence felt not only in this country but also broad. Then there is the educational service of the Propaganda Department which aims to investigate and expose the nostrum evil and quackery. The appropriations for special journals, and for research work in numerous investigations make the work of the Association of great value, but these various undertakings require an abundance

of money and for that reason the profit accruing from the publication of *The Journal* is necessary.

IN the ninth of a series of five-minute health talks by Dr. Hermann M. Biggs, New York, sent out by radio, tourists and camping parties are warned to guard against impure water for drinking purposes. People invariably make provisions for proper clothing, cooking utensils, good things to eat, etc., before starting on camping trips, but usually depend on getting water "any place along the way". This is not a good policy, as *safe* water is not always to be found when one wants it most. With the ever increasing number of campers, fishermen and hunters, there is a corresponding greater chance for the pollution of streams, thus rendering unsafe for drinking such surface water as found in springs, streams, ponds, etc. Attention is called to the fact that even the clear, sparkling water found in brook or spring may be polluted with the germs of typhoid. Campers are urged to get water from springs quite distant from dwellings and camps, and, when in the least doubt about the safety of the water, enough for the day should be boiled for five minutes over the camp fire, cooled in a cold stream, and kept tightly corked. Physicians would do well to speak a warning word on this subject to the laity.

ACCORDING to the report of the Committee on Legislation of the New York State Medical Society, the State of New York has less than one thousand chiropractors and about nine thousand regular practitioners of medicine who are members of the State society. The chiropractors alone spend from thirty to fifty thousand dollars a year to maintain their legislative lobby, which means a contribution from each chiropractor of from thirty to fifty dollars a year. Contrast that with seven cents a year paid by each member of the medical society of the State of New York. Practically the same state of affairs exists in every other state of the Union and exists in Indiana where the conditions are even more deplorable. It is known that the chiropractors spend several thousand dollars a year in legislative and propaganda work in Indiana, and for many years the legislative committee of the Indiana State Medical Association has spent less than one hundred dollars per year, and that merely for a little stationery, postage and telegrams while the legislature was in session. Is it any wonder that the chiropractors accomplish results? Further comment is unnecessary.

THE American Medical Association defines state medicine as "any form of medical treatment provided, conducted, controlled, or subsidized by the federal or any state government or municipality, except such service as is provided by the Army, Navy or Public Health Service and that which is necessary for the control of communicable diseases, the treatment of mental diseases, the treatment of indigent sick and such other services as may be approved by and administered under the direction of a local county medical society and are not disapproved by the state medical society of which it is a component part." This was a compromise measure to take the place of a number of resolutions concerning state medicine that were introduced in the House of Delegates at the St. Louis session. In reality what the Association should have done was to have put itself on record as opposed to any treatment furnished or controlled by federal, state or municipal authorities which is given or offered to any but the indigent, and is in direct competition with individual practitioners of medicine. The Association might have gone a step further and put itself on record as to the reasons why opposition is offered to state medicine.

THE board of trustees of the University of Cincinnati has adopted a resolution re-affirming its purpose to establish a pay ward at its hospital and to permit surgeons of the staff of the medical college to operate private patients there and to charge for the operations. The resolution was adopted in answer to an objection raised a few months ago by a leading Cincinnati physician in an address before the members of the Cincinnati Academy of Medicine. From this we are led to believe that so far as the University of Cincinnati is concerned the wishes of the medical profession as a whole are not to be considered in framing the policies of the medical department of that institution. Our conception of a hospital in connection with the University is that it is for purely teaching purposes, and as there are enough indigent patients to more than fill the wants of the teaching force of the medical department of the University it seems unnecessary to either throw down the bars for the admission of patients able to pay or to try to increase the income and prestige of the hospital and incidentally the prestige of the members of the medical and surgical staff of the hospital by admitting pay patients.

THE narcotic drug question is receiving serious consideration in the East, particularly in New York State. That other states will have to contend with the question is a foregone conclusion, and it is well to bear in mind that there are sinister influences at work to put the narcotic drug control in the hands of commercial interests and make it possible for drug addicts to be served, while at the same time the members of the medical profession are seriously handicapped in the legitimate prescribing and

use of narcotics of any kind. The idea of committing all drug addicts to public and private hospitals or sanitaria where narcotics may be administered in any amount, without any check being placed upon the practice, is in itself a dangerous proposition, but when this sort of an arrangement is proposed in connection with the further provision that physicians be obliged to keep records for every dose of a narcotic administered, prescribed or dispensed, whether directly or indirectly, is a discrimination which is as unfair as it is iniquitous. The control of drug addiction is a difficult one to regulate, but there is no reason why the matter should be commercialized by either public or private sanitaria.

THE decision on the part of the American Medical Association to establish a central bureau for consideration of legislation is a step that should have been taken long ago. All legislative matters pertaining to medicine or the practice of medicine should receive the careful consideration of a bureau representing the entire medical profession of the United States, and this bureau should be composed of permanent members who are well qualified for the position. In reality this bureau will take the place of a paid lobby in its endeavors to acquaint congressmen and legislators with pertinent facts concerning contemplated legislation that affects the medical profession or the practice of medicine either directly or indirectly. The reason that Congress and the various state legislatures have a tendency to consider some proposed legislation that is most obnoxious and injurious to public welfare is because such proposed legislation is represented by those who are interested in it for personal and selfish reasons and heretofore but little opposition has been offered by a united medical profession. It is time for medical men to wake up and present a solid front against all forms of vicious legislation which affect the medical profession individually or collectively, or the practice of medicine.

WE never have approved the Volstead Act and always have felt that the act represented the opinion of a minority of the people of this country. However, the Volstead Act is the law of the land and even its incomplete enforcement has resulted in untold benefit to the country as a whole. Furthermore, a law to be effective must be enforced, and we have no quarrel with those who desire the enforcement of the Volstead Act in a fair and honorable way. Therefore, we look with disfavor upon the action of the House of Delegates at the St. Louis session of the American Medical Association in passing a resolution calling upon the Secretary of the Treasury and the Congress of the United States for the adoption of provisions for supplying bonded whiskey for medicinal use only at a fixed retail price to be established by the government. In its ultimate analysis this simply means that a large number and perhaps a majority of the physicians of this country will become licensed bootleggers. The editor of THE JOURNAL does not remember ever to have refused a drink, and does not refuse one now if he can satisfy himself that what he is offered is not "moonshine", or doctored with wood alcohol, but he is distinctly opposed to the idea that whiskey is necessary for medicinal purposes, or that the privilege of prescribing whiskey for medicinal purposes can be left to the discretion of the average physician who will be tempted to prescribe whiskey as a beverage on the spurious plea that it is needed as a medicine. On the whole we believe that the action of the American Medical Association at the St. Louis session is not in keeping with the high ideals of our profession, for while the conscientious physician will not abuse any privilege accorded him in the prescribing of whiskey for medicinal use, there are countless thousands who will take advantage of the situation and become nothing better than ordinary bootleggers who purvey whiskey for a price.

AGAIN the stupendous work carried on directly and indirectly by the Rockefeller Foundation, through its departmental agencies, the International Health Board, the China Medical Board, and the Division of Medical Education, is brought to our attention through their annual report, summarized as follows:

Continued a quarter-million annual appropriation to the School of Hygiene and Public Health of Johns Hopkins University;
Pledged two millions to Harvard for a school of health;
Contributed to public health training in Czechoslovakia, Brazil, and the United States;
Aided the Pasteur Institute of Paris to recruit and train personnel;
Promoted the cause of nurse training in America and Europe;
Underwrote an experimental pay clinic in the Cornell Medical School;
Formally opened a complete modern medical school and hospital in Peking;
Assisted twenty-five other medical centers in China;
Promised a million dollars for the medical school of Columbia University;
Contracted to appropriate three and one half millions for the rebuilding and reorganization of the medical school and hospital of the Free University of Brussels;
Made surveys of medical schools in Japan, China, the Philippines, Indo-China, Straits Settlements, Siam, India, Syria, and Turkey;
Supplied American and British medical journals to 112 medical libraries on the continent;
Supplemented the laboratory equipment and supplies of five medical schools in Central Europe;
Defrayed the expenses of commissions from Great Britain, Belgium, Serbia, and Brazil;
Provided 157 fellowships in hygiene, medicine, physics, and chemistry, to representatives of eighteen countries;

Continued a campaign against yellow fever in Mexico, Central and South America;
Prosecuted demonstrations in the control of malaria in ten states;
Co-operated in hookworm work in nineteen governmental areas;
Participated in rural health demonstrations in seventy-seven American counties and in Brazil;
Neared the goal of transferring to French agencies an anti-tuberculosis organization in France;
Provided experts in medical education and public health for counsel and surveys in many parts of the world, and rendered sundry minor services to governments and voluntary societies.

CONCERNING the question of socializing medicine the *Ohio State Journal* has some pertinent comments concerning the uplift schemes masquerading under the term conservation, prevention, promotion, preservation, protection, correction, etc. Too frequently these movements, though unselfishly conceived and carried forward with unquestionable motives, lead to all sorts of abuses and even failures. Too frequently is medical service exploited in return for self gratification. Although medical service is being commandeered the public gains the impression that through failure on the part of the profession these spasmodic, periodic efforts in public education and treatment are necessary, whereas in many instances they are only satisfying the whims of chronic reformers and uplifters. Physicians and surgeons should be praised rather than censured for giving freely of their time and service in worthy practical causes, but special public health movements, campaigns and clinics may sometimes serve as subtle propaganda for individuals, and feeders for individual practice.

"If only the vast funds and unlimited energy along these lines were used in purely educational efforts; if the public could be taught that regular, frequent and thorough medical examination are necessary, and that even apparently trivial ailments should be promptly and properly treated, thus preventing later suffering, malignancy and premature death; if the public could be educated to avoid the quack, the pretender, the incompetent; to fear and avoid self-diagnosis and self-treatment; if the inefficiency and danger of cure-alls and single-method therapy for all ailments could become common knowledge, there would be little if any excuse for the multitudinous socialized schemes for the cure of human ills.

"These statements are made with the assumption that the individual physician will recognize his obligations to his patient and to the public. As one eminent public health official recently said to the writer: 'The medical profession is not only responsive to the value of public health work as a vital and necessary effort in education and prevention but it has long advocated such principle as a duty to the public. However, we have a right to expect that if we can educate the public to frequent physical examinations and to expect and demand competent service for medical and surgical ills rather than to rely on blatant claims of quacks and cultists; that genuine and conscientious service will be rendered. If each physician and surgeon would do his very best in each case, if he will be consistently thorough with each patient, there would be fewer followers of senseless frauds and fads.'"

DEATHS

D. D. CLARK, M.D., died at his home in Decatur, May 1 at the age of 55 years. Dr. Clark graduated from the Fort Wayne College of Medicine in 1891.

JOHN F. BENHAM, M.D., died at his home in Mooresville, May 11, following a brief illness. Dr. Benham was a graduate of the Medical College of Ohio, Cincinnati.

ELI BROWN, M.D., died at his home in Thorntown, May 10, at the age of seventy-six years. Dr. Brown graduated from the Eclectic Medical College of Cincinnati in 1879.

J. W. BIRCHFIELD, M.D., died at Hemlock, May 11, at the age of sixty years. Dr. Birchfield was a graduate of the Central College of Physicians and Surgeons, Indianapolis.

GEORGE W. FLEMING, M.D., died at his home in Shelbyville, May 3. Dr. Fleming graduated from the Bellevue Hospital Medical College, New York, in 1868. He was seventy-nine years of age.

CHARLES D. UMBERHINE, M.D., died at his home in Mechanicsburg, May 12. Dr. Umberhine was fifty-nine years of age. He graduated from the Rush Medical College, Chicago, in 1885, and was a member of the Indiana State Medical Association and the American Medical Association.

IRVIN O. ALLEN, M.D., of Bath, died April 27, at the age of fifty-seven years. Dr. Allen graduated from the Louisville Medical College, Kentucky, in 1898. He was a member of the Franklin County Medical Society, the Indiana State Medical Association and the American Medical Association.

MARIA JESSUP, M.D., of Fairfield, died May 5 at the age of 76 years. Dr. Jessup was a member of the Marion County Medical Society, the Indiana State Medical Association, and the American Medical Association. She graduated from Northwestern University Woman's Medical College in 1887.

C. E. MILLIGAN, M.D., Winchester, died May 4, aged 59 years. Dr. Milligan was a graduate of the Physio-Medical College of Indiana, Indianapolis, in 1890. He was a member of the Randolph County Medical Society, the Indiana State Medical Association and the American Medical Association.

M. P. DIDLAKE, M.D., of Monticello, died May 12 at the age of 78 years. Dr. Didlake graduated from the Northwestern University School of Medicine, Chicago, in 1867. He was a member of the White County Medical Society, the Indiana State Medical Association and the American Medical Association.

JAMES H. CHRISTIE, M.D., died at the home of his son in Indianapolis, May 7, at the age of seventy-three years. Dr. Christie graduated from the Cincinnati College of Medicine and Surgery in 1870. He was a member of the Jefferson County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

THE LaPorte County Medical Society held its regular meeting at Michigan City, May 12.

DR. FAYE O. SCHENCK, of Crawfordsville, has announced his retirement from active practice.

DR. EMERY D. LUKENBILL of Portland and Miss Treva Steed of Redkey were married May 8.

THE next meeting of the Seventh District Medical Society will be held in Indianapolis, October 26.

NURSES of District No. 1, State Nurses' Association, held their annual convention at Bluffton, May 13.

DR. R. R. ACRE, of Evansville, and Miss Beulah Gibson, of Indianapolis, were married at Indianapolis recently.

DR. THEODORE V. PETRANOFF has been appointed assistant surgeon at the Wabash railway hospital, Peru.

THE contract has been let for the erection of a new county hospital at Greencastle, Indiana. $95,000 has been appropriated for the building.

THE Wabash County Medical Society held its meeting at Wabash, April 20. Papers were presented by Dr. Whisler and Dr. Walker, of Lafontaine.

THE Howard County Medical Society held its meeting at Kokomo, May 5. A paper on "Endocrines" was presented by Dr. R. E. McIndoo.

DR. C. B. THOMAS, of Plainfield, was made president of the Indiana Physico-Medical Association at the sixtieth annual convention held at Indianapolis, May 12.

CHIROPRACTORS practicing in Wisconsin cannot add the abbreviation "Dr." or "D. C." to their names as it is unlawful and in violation of the statutes.

CONGRESSIONAL action on the bill making immediately available $12,000,000 for construction of hospitals for former service men was completed May 6th.

AT a recent meeting of the Henry County Medical Society the regular meeting date was changed from the first Friday to the second Tuesday of each month.

DR. W. D. CALVIN of Fort Wayne has been appointed councilor for the Twelfth District Medical Society to fill out the unexpired term of Dr. E. E. Morgan, deceased.

THE Madison County Medical Society held a meeting at Elwood, May 10. Papers were presented by Dr. Frank Newcomer, of Elwood, and Dr. S. W. Miley, of Anderson.

THE Kosciusko County Medical Society held its regular monthly meeting at Warsaw, April 25. A paper on "Diabetes" was presented by Dr. W. B. Siders of Warsaw.

THE Third District Medical Society met May 4 at Paoli. Papers were presented by Dr. Green, of Pekin; Dr. Horrine, of Louisville, Ky., and Dr. Gillespie of Seymour.

THE regular meeting of the Huntington County Medical Society was held at Huntington, May 5. Dr. Charles Beall of Fort Wayne presented a paper on "Intestinal Troubles."

DR. C. E. HOWARD has severed his connections with Dr. M. E. Klingler in the Clinic at Garrett, and has opened offices in San Diego, California, where he will make his future home.

THE Boone County Medical Society held its regular meeting at Lebanon, May 2. Dr. L. D. Carter, of Indianapolis, presented a paper on "Psychoanalysis and Suggestive Therapeutics."

THE Randolph County Medical Society held its meeting at the Randolph County Hospital, Winchester, May 8. A paper on "Shall We Advertise" was presented by Dr. E. G. Reynard of Union City.

DR. WARFIELD T. LONGCOPE has been appointed professor of medicine at the Johns Hopkins University Medical Department and physician-in-chief at the Johns Hopkins Hospital, beginning on July 1.

THE regular monthly meeting of the Jay County Medical Society was held at Portland, May 11. Dr. W. D. Schwartz presented a paper on "Foreign Bodies" and Dr. J. E. Nixon presented a paper on "Fractures of the Femur."

DR. GEORGE E. DE SCHWEINITZ, of Philadelphia, was elected president, and Dr. Luther C. Peter, also of Philadelphia, was elected secretary of the International Congress of Ophthalmology which met in Washington, D. C., April 25th and 26th.

THE Eleventh Indiana Councilor District Medical Society held its twenty-seventh annual meeting at Huntington, May 18. A clinic on the diseases of children was held at the Huntington County Hospital with Dr. A. C. Costello, of St. Louis, in charge.

AT the fifty-sixth annual meeting of the Indiana Institute of Homeopathy, Dr. George Lowe of Indianapolis was elected president; Dr. Frank Eikenberry of Peru, vice-president; Dr. Archie Jones of LaGrange, secretary; and Dr. J P. Slabaugh of Nappanee, treasurer.

DR. S. D. MALOUF of Peru has gone abroad to take special work in the diseases of the kidneys and bladder. He expects to study at Paris and Rome. Dr. Malouf will return to this country about the middle of October and will then resume his practice of medicine at Peru.

PRESIDENT HARDING has transferred from the control of the U. S. Public Health Service to the U. S. Veterans' Bureau the hospitals operated by the former for the medical care and treatment of World War veterans. Fifty-seven hospitals have been turned over to the U. S. Veterans' Bureau.

THE following officers of the American Society for the Control of Cancer have been elected for the year 1922: Dr. Charles A. Powers, president; Dr. George E. Armstrong, Dr. Clement Cleveland, Dr. L. Farrand, Dr. Rudolph Mates, vice-presidents. Thomas M. Debevoise, secretary; and Dr. Calvert Brewster, treasurer.

A DECISION in the Ohio state court of appeals, which was affirmed by the state supreme court, ruled that chiropractors cannot practice in Ohio unless licensed to do so by the state medical board. The result is that chiropractors who are said to have been practicing in the state, without licenses, will be subjected to vigorous prosecution unless they secure licenses to practice.

AT the forty-fourth annual congress of the American Laryngological Association, held in Washington, D. C., May 1 to 3, the following officers were elected for the ensuing year: Dr. Emil Mayer, New York, president; Dr. George Fetterolf, Philadelphia, and Dr. L. B. Lockard, Denver, vice-presidents; Dr. George M. Coates, Philadelphia, secretary, and Dr. Joseph P. Clark, Boston, treasurer.

THE Marion County Tuberculosis Hospital, located just outside of Indianapolis, has started construction on three new units, one of which is a children's building planned to accommodate forty-four juvenile patients, and two units of twenty-four beds each for adult patients. Within the next few weeks construction will be started on a large unit to be used exclusively for colored patients.

THE American Legion is conducting a campaign to raise two million dollars to establish a camp for tuberculous ex-service men at Tupper Lake in the Adirondack Mountains. Twenty buildings on a 1200 acre site already have been purchased. It is planned to have the camp advanced enough to care for 1700 men during the first year. Headquarters are at the Astor Hotel, New York City.

IN addition to the articles enumerated in the May number, the following article was accepted during April for inclusion in New and Nonofficial Remedies: Intra Products Co., Ven Sterile Solution Procaine 1 per cent. During May the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: G. W. Carnrick Co.: Epinephrine-G. W. C. Co., Epinephrine Chloride Solution-G. W. C. Co.;

Intra Products Co.: Phenolsulphonephthalein-Ipco, Ven Sterile Solution Phenolsulphonephthalein; Lederle Antitoxin Laboratories: Pollen Diagnostics-Lederle; H. K. Mulford Co.: Diphtheria Toxin-Antitoxin Mixture—Mulford; National Aniline and Chemical Works: Neutral Acriflavine-Heyl, Tablets Neutral Acriflavine-Heyl, 0.1 Gm. (1½ grs.), Neutral Acriflavine-Heyl Throat Tablets, Neutral Acriflavine-Heyl "Pro Injectione" 0.5 Gm. vials, Neutral Acriflavine-Heyl "Pro Injectione" 1.0 Gm. vials; Winthrop Chemical Co.: Luminal Tablets ¼ grain.

UNDER the auspices of the Indiana State Board of Health and the Indianapolis Board of Health, in cooperation with all civic and community organizations of Indianapolis, the National Health Exposition Association put on an Indiana Health Exposition at the State Fair Ground, Indianapolis, May 19 to 27 inclusive. The program included motion pictures, musical numbers, pageants, demonstrations of various sorts, exhibits, and lectures and addresses by noted health workers. Dr. Frank B. Wynn served as chairman of the Educational Exhibit Committee; Dr. W. N. Wishard, chairman Pre-Exposition Sale of Tickets Committee; Dr. C. S. Woods, chairman Program Committee; Dr. Charles P. Emerson, chairman Collaborating Committee; Dr. R. E. Whitehead, chairman Speakers Committee; Mrs. Jane Teare Dahlman, Educational Director; R. E. Logsdon, Managing Director, and John A. McKeown, Associate Director. Friday, May 19, was known as Public School Day; Saturday, James Whitcomb Riley Day; Monday, Indiana Day; Tuesday afternoon, Women's Club Day; Tuesday evening, Men's Club Night; Wednesday afternoon, Doctors' and Nurses' Day; Wednesday evening, Personal Hygiene Night; Thursday afternoon, Oral Hygiene Day; Thursday evening, Civic Clubs' Night; Friday afternoon, Industrial Hygiene Day; Friday evening, Rural Health Problem Night; Saturday afternoon, Indianapolis Day; Saturday evening, Indianapolis Night.

The aim of the Exposition was the education of the public in disease prevention, and it is estimated that three hours devoted to the study of the exhibits and displays would provide the average citizen with a liberal education in how organization and government provide for the care of community health and at the same time how the individual in his daily and family life may escape disease.

Following is the registration of Indiana physicians at the St. Louis session of the American Medical Association:

Baker, Clarence S., Evansville. Baldridge, Ezra R., Terre Haute. Bannon, F. R., Kokomo. Beasley, Thos. J., Indianapolis. Bowers, H. C., Akron. Bradfield, John Logansport. Bulson, Albert E., Jr., Fort Wayne. Busard, Clifford F., South Bend. Carmack, John W., Indianapolis. Cleveland, W. R., Evansville. Clifford, J. W., Worthington. Combs, Charles N., Terre Haute. Conover, Earl, Evansville. Cummings, D. J., Brownstown. Dailey, John E., Terre Haute. Davis, William M., Worthington. Davisson, C. V., West Lafayette. Doerr, John E., Mt. Vernon. Dyer, Wallace C., Evansville. Eberwein, J. H., Indianapolis. Eckhart, G. G., Marion. Eshleman, L. H., Marion. Foreman, William H., Indianapolis. Gilliland, C. E., Terre Haute. Grandy, C. C., Fort Wayne. Grossman, W. L., North Vernon. Growan, Herman C., Hammond. Guedel, Arthur E., Indianapolis. Hade, F. L., Bridgeport. Holloway, William A., Logansport. Hoy, B. F., Syracuse. Kelper, George F., Lafayette. Larkin, Bernard J., Indianapolis. Lapenta, Vincent A., Indianapolis. Lent, E. S., South Bend. Lochry, Ralph L., Indianapolis. Lomax, Claude, Holland. Lorenz, John W., Evansville. Luckett, Luther P., Terre Haute. Lukemeyer, Louis C., Huntingburg. Mattox, Ernest L., Terre Haute. McCool, John F., Indianapolis. McClunkin, J. C., Evansville. Merritt, Frank W., Gary. Mitchell, H. F., South Bend. Mobley, R. F., Summitville. Mozingo, Arvine E., Indianapolis. Oliver, J. H., Indianapolis. Palmer, Adelbert L., Logansport. Pennington, W. E., Indianapolis. Pierce, Harold J., Terre Haute. Pierson, Allen, Spencer. Province, Clarence, Franklin. Rietz, P. C., Evansville. Romberger, Floyd T., Lafayette. Rose, B. S., Evansville. Ross, David, Indianapolis. Ruddick, Hobart C., Evansville. Savery, Charles E., South Bend. Sellers, Charles A., Hartford City. Sensenich, South Bend. Schreiber, A. W., Lafayette. Tomlinson, C. H., Cicero. Ulmer, David R., Terre Haute. Viehe, Robt. W., Evansville. Voyles, C. F., Indianapolis. Walker, F. C., Indianapolis. Walters, Arthur, Indianapolis. Weinstein, Joseph H., Terre Haute. Williams, W. H., Dale. Wood, E. U., Columbus. Zimmerman, J., Lynnville. Aikman, Everett M., Indianapolis. Ball, Thomas Z., Waveland. Banister, Revel F., Indianapolis. Berry, David F., Indianapolis. Bitler, Clyde C., New Castle. Black, C. S., Warren. Bloomer, Joseph R., Rockville. Carey, Willis W., Fort Wayne. Butler, Raymond A., Beech Grove. Clark, Edmund D., Indianapolis. Clutter T. J., Mentone. Combs, P. B., Evansville. Cooper, Ernest, Plainfield. Cosby, G. O., Elizabethtown. Cottingham, J. E., Evansville. Cregor, Frank W., Indianapolis. Dees, Harry E., Evansville. DeWees, Roy E., Hartford City. Eastman, Joseph Rilus, Indianapolis. Egart, Stephen L., Indianapolis. Fleming, J. C., Elkhart. Garshwiler, William P., Indianapolis. Graham, Alois B., Indianapolis. Grayston, Wallace S., Huntington. Hatfield, S. D., Kokomo. Hatfield, Sidney J., Indianapolis. Hayden, A. M., Evansville. Jackson, Gustavus B., Indianapolis. Johnston, R. G., Huntington. Kennedy, W. H., Indianapolis. Kennedy, T. C., Indianapolis. Kitson, Frank S., North Manchester. Kruse, Edward H., Fort Wayne. Lairy, M. M., Lafayette. LeBier, Clarence R., Terre Haute. Lindenmuth, E. O., Indianapolis. Lingeman, E. L., Indianapolis. McDonald, A. C., Warsaw. McKinney, J. W., Bluffton. Malmstone, Francis A., Griffith. Marshall, Geo. D., Kokomo. Marshall, L. C., Mt. Summit. Marshall, T. J., Charlestown. Matthews, D. W., Commiskey. Metts, Fred A., Bluffton. Miller, George D., Logansport. Miller, S. T., Elkhart. Noble, Thomas B.,

Indianapolis. Osbon, Guy G., Jasonville. Overshiner, Lyman, Columbus. Padgett, Everett E., Indianapolis. Page, Lafayette. Indianapolis. Parker, Harry C., Gary. Parr, W. L., Evansville. Radcliffe, F. E., Bourbon. Raydin, Bernard D., Evansville. Rayl, C. C., Decatur. Reed, John H., Logansport. Ricketts, J. W., Indianapolis. Roope, A. P., Columbus. Satterlee, Albert R., Crawfordsville. Schoen, P. H., New Albany. Sellers, C. A., Hartford City. Shafer, Howard O., Rochester. Smith, Geo. H., New Castle. Smoot, Dora Brooks, Washington. Sterman, George E., New Castle. Van Sweringen, Budd. Fort Wayne. Thompson, G. W., Winimac. Tomlin, Wm. S., Indianapolis. Tucker, W. M., Greencastle. Tully, Lee H., Evansville. Ward, H. H. Coalmont. Warter, Phil, Evansville. Weiss, H. G., Evansville. Welborn, James Y., Evansville. Westhafer, E. K., New Castle. Wheeler. Homer H., Indianapolis. Williams, Luther. Indianapolis. Wishard, Wm. N., Indianapolis. Woods, Charles S., Indianapolis. Zaring, Everett J., Terre Haute. Allen, H. R., Indianapolis. Bartley, Donald A., Indianapolis. Becknell, Irvin J., Goshen. Brubaker, Ora G., North Manchester. Carlson, Edward A., Peru. Catlett, Marshall B., Fort Wayne. Chappell, Ralph S., Indianapolis. Clayton, G. R., Lafayette. Clevenger, William F., Indianapolis. Collins, C. C., Roachdale. Crowder, J. R., Sullivan. Cuthbert, Fred S., Kokomo. Daniels, E. O., Marion. Dukes, F. M., Dugger. Egbert, Robert H., Martinsville. Eby, H. W., Goshen. Emery, Charles H., Bedford. Foxworthy, Frank W., Indianapolis. Garrettson, John A., Indianapolis. Gatch, W. D., Indianapolis. Gillespie, Chas. E., Seymour. Griffith, B. B., Vincennes. Hadley, James W., Frankfort. Hardesty, William L., Evansville. Hoffman, Robert V., South Bend. Holman, J. E., Indianapolis. Hughes, William Lloyd, Indiana Harbor. Johnston, W. F., Richmond. Kearby, D. O., Indianapolis. Kiser, Edgar F., Indianapolis. Knapp, A. B., Vincennes. Kyte, E. G., Indianapolis. Langdon, Harry K., Indianapolis. Laws, Harry J., Lafayette. Lyon, Martha Brewer, South Bend. Lyon, M. W., Jr., South Bend. McCaskey, Carl H., Indianapolis. McCarthy, F. G., Terre Haute. McCown, P. E., Indianapolis. McMahon, Adah M., Lafayette. Marshall, T. J., Charlestown. Miller, Wm. H., Terre Haute. Molloy, W. J., Muncie. Morrison, Frank A., Indianapolis. Nichols, A. A., Fargo. Ottenger, Ross S., Indianapolis. Pearlman, Samuel. Lafayette. Phares, J. W., Evansville. Porter, M. F., Fort Wayne. Raydin, M., Evansville. Repass, Robert E., Indianapolis. Ross, Louis F., Richmond. Richards, D. H., Vincennes. Ritchey, J. O., Indianapolis. Roope, A. P., Columbus. Ruddell, K. R., Indianapolis. Rupel, Ernest, Indianapolis. Sandy, Wm. J., Martinsville. Senseny, Herbert M., Fort Wayne. Schuler, R. P., Kokomo. Schweitzer, Ada E., Indianapolis. Scott, G. D., Sullivan. Shafer, Jno. W., Lafayette. Shead, Hugh B., New Carlisle. Smith, James M., Indianapolis. Smith, Lester A., Indianapolis. Sparks, A. J., South Bend. Stephenson, Richard, West Lebanon. Strange, J. W., Loogootee. Swartzel, Joseph A., Indianapolis. Taylor, W. H., Ambia. Thompson, Walter N., Sullivan. Thrasher, John R., Indianapolis. Veach, P. H., Staunton. Ward, John Paxton, Vevay. Warman, A. P., Terre Haute. Wynn, Frank B., Indianapolis. Beverland, M. E., Indianapolis. Boyd, Claudius L., Vincennes. Elliott, Harry, Brazil. Forsyth, D. H., Terre Haute. Gillum, J. H., Terre Haute. Hagie, F. E., Richmond. Jett, Frank H., Terre Haute. Johnson, Wm. A., Perrysville. Johnston, David E., Milan. Mertz, H. O., Indianapolis. Mumford, E. B., Indianapolis. Short, John T., Fort Wayne. Wiedemann, Frank E., Terre Haute. Yeck, Charles W., Evansville.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District—Councilor	No of Counties	1921 Memberships	1922 Memb'sh'ps to date	Percentage
1st—Dr. Willis	7	176	173	.98
2nd—Dr. Schmadel	7	149	140	.94
3rd—Dr. Leach	9	130	115	.88
4th—Dr. Osterman	10	138	134	.97
5th—Dr. Weinstein	5	158	154	.97
6th—Dr. Spilman	8	150	159	1.06
7th—Dr. Earp	4	425	438	1.03
8th—Dr. Conrad	5	172	157	.91
9th—Dr. Moffitt	10	253	246	.97
10th—Dr. Shanklin	5	151	137	.90
11th—Dr. Black	6	191	190	.99
12th—Dr. W. D. Calvin	8	241	237	.98
13th—Dr. Berteling	8	274	253	.92
	92	2608	2533	

NINTH COUNCILOR DISTRICT

The annual meeting of the Ninth Councilor District of the Indiana State Medical Association was held at Crawfordsville on May 17, under the direction of Dr. A. C. Arnett, Lafayette, President, and Dr. Thos. L. Cooksey, Secretary-Treasurer. The meeting opened at 1:30 p. m. with an address of welcome by Mayor Earl Berry. Scientific papers were presented as follows: The Scope of Urology, Dr. A. M. Sullivan, South Bend; Comparative Anatomy of the Eye, Dr. George F. Keiper, Lafayette; The Occiput Poster Position (demonstrated with lantern slides), Dr. Edward Lyman Cornell, Chicago.

The meeting closed with a banquet in the evening.

TIPPECANOE COUNTY

After a six o'clock luncheon at the Hotel Lahr Lafayette, the April 25 meeting of the Tippecanoe County Medical Society was called to order by President Ruschil. Regular Order of Business dispensed and Dr. John A. MacDonald of Indianapolis read a very concise paper on "Affections of the Mediastinum" which was illustrated by lantern slides.

SYNOPSIS: This region has been given scant consideration compared to its importance. Affections not rare nor impossible of elicitation. Mediastinum includes all structures in chest except lungs; is divided into four parts,—superior, middle, inferior and posterior. Examination: Four cardinal symptoms: dyspnea, pain, cough and expectoration. Dyspnea most common, worst form due to glandular enlargement with pressure. Cough almost constant, but varies in form and degree. Pain, if severe, usually means plura involved. Most always present in cases of tumors and aneurysms. Expectoration, any variety may be present. Pressure symptoms vary according to location, as aphonia, hoarseness, difficult swallowing, disturbances due to pressure on pneumogastric, pressure on blood vessels producing venous stasis with cerebral symptoms. Physical signs disappointing, but may have bulging, displaced apex beat or abnormal contour. Findings on palpation and percussion not essentially different from those elicited in other chest disorders. X-ray most valuable aid in diagnosis and should be utilized. Floroscoping unreliable. Diagnosis made by X-ray plates along with subjective symptoms and objective findings. *Inflammation*: Acute or chronic. Acute from trauma or from other adjacent nearby infections, or localized from general septicemia. Chronic as result of carcinoma, sarcoma, lukemia, adenopathy, tuberculosis or syphilis. *Tumors*: Benign and malignant. All essentially malignant because eventually become so. Benign not common though have fibroma, lipoma, cysts. Dermoid cysts most common. Of malignant, sarcoma most common with most frequent type being lympho-sarcoma. Produce

symptoms by pressure on adjacent structures, or by pressure on nerves that control distant structures. Carcinoma, primary or secondary, has more of tendency to break down and form cavities than do sarcoma.

DISCUSSION: Dr. Lairy.—Might add the finding of thymus gland in the young which is often the cause of sudden death. Mentioned a case of this kind coincident with exophthalmic goitre.

Dr. Pyke reported case of young man aged twenty with persistent cough which X-ray examination showed aneurysm size of orange. Patient couldn't be convinced, refused treatment and passed from observation, but had been heard of going from clinic to clinic.

Dr. Arnett offered the following resolution:

WHEREAS, Effort is now being made in this community and in the surrounding communities to aid in financing the improvements in our two local hospitals; and

WHEREAS, All the funds thus collected are to be expended locally; and

WHEREAS, For the past forty years this community and the surrounding communities have depended on these local hospitals and will continue to depend upon them for their needs in accident and sickness in the future; and

WHEREAS, At this time an effort is also being made to raise funds in this community to be used in the erection of a hospital at Indianapolis known as the Riley Memorial Hospital;

THEREFORE, Be It Resolved, That this Society feels it is in duty bound to advocate aid in the cause of the local hospitals, and to urge that whatever money is being given now or at any future time, be given to aid our two local hospitals rather than to give money to an Indianapolis hospital which can never be of direct local benefit to this community.

Be It Further Resolved, That a copy of this resolution be spread upon the minutes of this Society and that a copy be sent to the Home Hospital and to the St. Elizabeth Hospital of this city.

Motion to adopt the resolution made by Dr. Levering, seconded by numerous others and unanimously carried.

At this point the minutes of the previous meeting were read and approved without change.

Dr. Allen under the State Board of Health announced that the Child's Welfare Conference would be held here May 9 and 10 at which school age children would be weighed, measured, inspected and graded; and asked for the assistance of the local physicians.

Dr. W. S. Moffitt read a paper entitled "Personal Recollections of the 'Old Time Doctor'". This paper was so entertaining and so full of historical interest, that its text was ordered to be spread upon the minutes.

Adjourned.

WM. M. RESER, Secretary.

CORRESPONDENCE

THE DOCTOR'S REST AND RECREATION

Editor THE JOURNAL:

Some time ago the advertising editor of the "Journal of the American Medical Association" wrote to a number of physicians in regard to accepting advertisements showing where the tired physician could get rest and recreation. As many of our doctors in this state go to California and Florida for rest in the winter, both of which I have visited for that purpose, I wish to suggest another and better place which is easily accessible, and gives the added pleasure of a wonderful trip on a tropical sea. This trip can be made in four weeks or longer.

Leaving Indianapolis on March 8th we were within twenty-four hours in New Orleans, leaving behind a hail, rain and windstorm, and entering into Spring already established with the flowers in bloom, and sunshine making life worth while. On the next day we embarked on the Steamship "Zacapa" of the United Fruit Company, and for eight hours we were interested in the lovely panorama of the lower Mississippi river. This steamship line caters to the traveler's comfort in the Tropics, and with the use of the electric fan and the cold air duct you are able to keep your stateroom pleasant and comfortable even in the hottest of latitudes. Nearly three days after leaving New Orleans we entered the historic harbor of Havana. Five days in Havana was sufficient to see the sights of the place. Among the interesting places here I may mention the trip to the Casino, race track, an auto trip to the country showing the cultivation of tobacco, banana, pineapple and sugar-cane; a trip to the Toledo sugar mill where we saw the cane go in at one end and come out coarse brown sugar at the other end, ready to be sent to the United States for refinement. Other trips were made to the tropical gardens where beer was dispensed without cost for all who wished to drink, and yet no signs of any drunkenness. The remarkable thing was that there was only about a dozen people at the place, and these were all Americans. Other interesting trips included the Morro Castle, the Lighthouse, and Fort Cabannas. A river trip was made to see the national game, Jai Lai, which I think is one of the most exciting games I ever saw, at which most of the audience gamble, and which could be the most crooked of all gambling games. Facilities for shopping were most excellent and every lady in our party was delighted with the wonderful bargains in fans, perfume, toilet soap, and linens. The gentlemen were also delighted with the reasonable prices of the cigars as well as the other things to soothe and assuage a tropical thirst. Hotel prices here are high, but the cruise passengers without extra charge could remain on the boat, and if buying a ticket from port to port, a charge of two dollars ($2) per person a day is all that is needed to sleep on the boat. Excellent meals and sea-food dinners were had in the Cafe de Paris, Cosmopolita, Dos Hermanos, and the Cafe LaFayette.

Leaving Havana on the beautiful steamship "Ulua" of the United Fruit Company, which had on it about one hundred cruise passengers from New York, we were pleased to meet a friend of our Philippine days, Dr. Richard P. Strong, Professor of Tropical Medicine at Harvard University, who was on his way to establish The Gorgas Memorial Institute of Tropical Diseases in the City of Panama. Two days and a half more along the northern coast of Cuba brought us to the beautiful harbor of Port Antonio, Jamaica, the most beautiful spot of the West Indies. The place seemed to be most delightful to Hoosier eyes. I counted nine tropical fruits cooked, uncooked, or in sherbets on the bill-of-fare at the Hotel Titchfield. This is a most ideal spot to spend some time on account of the luxuriant foliage, the lovely breeze at evening and also the wonderful starry skies, revealing several thousand stars unseen in Indiana. Starting in the morning we took a four-hour auto trip across the island to Kingston. This is a mountainous trip and the mountains are as pretty as those of Switzerland. We stopped at the Castleton Gardens, where every known tropical plant grows. Kingston is hot during the middle of the day, before the sea breeze comes. It reminds you of Suez, Cawnpore, or Hong-Kong. The perspiration oozes through your clothes, and yet as soon as you relax in the shade of the Myrtle Bank Hotel you feel refreshed, and ready for another sightseeing or shopping trip. The ladies of the party enjoyed the many colored baskets, for here the most beautiful baskets in the world are made. I was much interested in a new tropical disease called "Alastran" which though never fatal shows similar clinical symptoms to smallpox, and the sufferer is miserable for many weeks with a terrible eruption. Dr. Strong located a fatal case of hookworm disease. It was fatal on account of the treatment by Chenopodium.

Shortly before our arrival a young girl lost her life by a large shark coming in the Kingston harbor and grabbing her while swimming. The shark was caught and put on exhibition and it certainly was a terrible creature. One of the older residents of the city said that it had been over forty years since this had occurred before. It did not seem to worry the brown boys as the natives dived every day for coins as usual.

Two and one-half days more brought us to the harbor of Christobal. It is hot in Panama and the lightest clothes are none too light, but the wonderful Hotel Washington and the cool breeze at night make life most pleasant.

Our party were guests at Fort Sherman, which is situated up in the hills. Here the breeze is strong and it is necessary to sleep with cover on you at night. In the shade you are cool at any hour of the day. A week here passed all too soon. Fishing is very good here, groupers, tarpon and amberjacks were

pulled out of the surf on the beach. Excellent fish are also found in the canal locks and along the Pacific Coast.

One day was devoted to an excursion trip to old Fort Lorenzo at the mouth of the Chagres river. This was the river the Spaniards used to bring the gold of Peru across the Isthmus and here can be seen thousands of cannon balls, hundreds of cannon and scores of dungeons.

A day at Ancon and Panama, both parts of one city, was delightfully spent in viewing the fortifications of old Panama, the wonderful cathedrals and the Ancon Hospital. It is a great pleasure to have Dr. Earheart and Dr. Clark, former Indianapolis men, to represent Indiana in such a wonderful hospital as they have there. The situation for the hospital is the most beautiful I have ever seen. Its equipment is perfect, and the results obtained there give its staff a reputation that extends from Central America down the coast of South America. It is an ideal situation for the study of tropical diseases.

The ladies agreed that this was the best place of the entire trip for Panama hats, Japanese and Chinese kimonos which were to be had at reasonable rates after much bargaining. The hotel rates at the Toivoli and the Washington at Christobal are reasonable, and the food at the government cafes is excellent and cheap.

Leaving Christobal on the "Atenas" of the United Fruit Company and in a little more than four days we were back again in New Orleans wishing we could start again and make the whole trip over. We have no regrets for making this lovely tropical trip. I am sure that any Hoosier physician would have much pleasure out of a trip of this kind more than the usual trip to California or Florida.

FRANK W. FOXWORTHY,
Indianapolis.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

IZAL.—An albuminous emulsion, containing not less than 50 per cent. of "izal oil," obtained in the destruction of bituminous coal, and consists essentially of monatomic phenols boiling between 205 and 300 C. Izal is practically free from phenol and cresols. Izal is a germicide and disinfectant. The germicidal efficiency is claimed to be twelve times as great as that of any equal quantity of phenol, but it is stated to be less toxic than phenol. The Abbott Laboratories, Chicago.

IZAL DISINFECTANT POWDER.—Izal oil, 10 per cent; naphthalene, 5 per cent; inert, absorbent earth, 85 per cent. The Abbott Laboratories, Chicago.

POWDERED PROTEIN MILK-MERRELL-SOULE.—DRY PROTEIN MILK.—A modified milk preparation having a relatively high protein content and a relatively low carbohydrate content. Each 100 Gm. contains approximately: protein, 38 Gm.; butter fat, 27 Gm.; free lactic acid, 3 Gm.; lactose, 24 Gm., and ash, 5 Gm. Powdered protein milk is said to be useful for correcting intestinal disorders of infants and children. For the majority of conditions, powdered protein milk should be administered in small quantities according to the age and condition of the patient, after a period of starvation of from twelve to forty-eight hours. Merrell-Soule Sales Corp., Syracuse, N. Y.

SABROMIN.— CALBROBEN.— CALCIUM DIBROMBEHENATE.—Sabromin contains not less than 28.5 per cent. of bromine. Sabromin is not adapted to conditions in which a rapid saturation of the system with bromine is required. It is indicated in conditions in which the bromides cannot be administered for continued periods without gastric disturbance or in which brominism is caused readily. It is claimed that sabromin is of value in conditions in which a mild sedative action is desired, particularly in conditions requiring prolonged administration.

Dosage: from 0.3 to 1.2 Gm. Winthrop Chemical Co., Inc., New York. (*Jour. A. M. A.*, May 6, 1922, p. 1389).

Sabromin tablets, 8 grains. Winthrop Chemical Company, Inc., (*Jour. A. M. A.*, May 6, 1922, p. 1389).

IOTHION.— IOPROPANE.— DI-IODO-HYDROXY-PROPANE.—Iothion contains from 77 to 80 per cent. of iodine. It is used when it is desired to obtain the systemic effect of iodides by external application. Iothion is used in the form of iothion oil, in solution in alcohol or glycerin, or in the form of ointments containing from 5 to 20 per cent. of iothion. Winthrop Chemical Company, Inc., New York (*Jour. A. M. A.*, May 13, 1922, p. 1459).

IOTHION OIL.—Iothion, 10 parts; chloroform, 10 parts; olive oil, 80 parts. Winthrop Chemical Co., Inc., New York, (*Jour. A. M. A.*, May 13, 1922, p. 1459).

TYPHOID-PARATYPHOID VACCINE (Prophylactic) (See New and Nonofficial Remedies, 1922, p. 310).—A typhoid vaccine marketed in packages of three 1 Cc. bulbs, the first dose containing 500 million killed typhoid bacteria, 375 million killed paratyphoid A and 375 million killed paratyphoid B bacteria; the second and third doses each containing 1,000 million killed typhoid bacteria, 750 million killed paratyphoid B bacteria respectively. Parke, Davis & Co., Detroit, Mich.

PNEUMOCOCCUS VACCINE (4 TYPES) (See New and Nonofficial Remedies, 1922, p. 304).—A suspension of pneumococci, Types I, II, III and Group IV, in equal proportions, in physiologic solution of sodium chlorid, preserved with cresol, 0.3 per cent. Each cubic centimeter contains 3,000 million killed bacteria. Marketed in packages of four 1 Cc. bulbs; four 1 Cc. syringes; 5 Cc. vials and 20 Cc. vials, respectively. Parke, Davis and Co., Detroit, Mich.

STREPTOCOCCUS VACCINE POLYVALENT (SCARLATINA).—A streptococcus vaccine (See New and Nonofficial Remedies, 1922, p. 308), marketed in packages of four 1 Cc. bulbs, each cubic centimeter containing 1,000 million killed streptococci isolated from scarlatina cases; also marketed in packages of 4 Cc. syringes, in 5 Cc. vials and in 20 Cc. vials. Parke, Davis and Co., Detroit, Mich.

PERTUSSIS VACCINE.—A pertussis bacillus vaccine (See New and Nonofficial Remedies, 1922, p. 303), marketed in packages of four 1 Cc. bulbs, each cubic centimeter containing 4,000 million killed pertussis bacilli (Bordet); also marketed in packages of four 1 Cc. syringes, in 5 Cc. vials and 20 Cc. vials. Parke, Davis and Co., Detroit, Mich., (*Jour. A. M. A.*, May 13, 1922, p. 1459.)

DIPHTHERIA TOXIN-ANTITOXIN MIXTURE-MULFORD.—T. A. MIXTURE-MULFORD.—Each Cc. of this mixture (See diphtheria antitoxin-toxin mixture, New and Nonofficial Remedies, 1922, p. 282) constitutes a single dose containing three lethal doses of toxin and 3.5 units of antitoxin. It is marketed in packages of three 1 Cc. vials; in packages of thirty 1 Cc. vials, and in packages of one 10 Cc. vial. H. K. Mulford Co., Philadelphia.

PHENOLSULPHONEPHTHALEIN-IPCO.—A brand of phenolsulphonephthalein-N.N.R. (See New and Nonofficial Remedies, 1922, p. 222). It is marketed in the form of Vensterile solution phenolsulphonephthalein, 1 Cc. representing phenolsulphonephthalein-Ipco 0.006 Gm. in the form of the monosodium salt. Intra Products Co., Denver., (*Jour. A. M. A.*, May 23, 1922, p. 1612.)

PROPAGANDA FOR REFORM

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the Federal authorities charged with the enforcement of the Food and Drugs Act:

Iron Elixir (Charles S. Miller), a dilute watery solution of sodium citrate and iron chlorid, with a slight trace of alcohol, sold as a cure for pimples and boils and as a blood purifier.

Vegetable Regulator (Charles S. Miller), an alkaline watery solution containing aloes and baking soda, claimed to be a remedy and cure for diseases of the liver, diseases pertaining to the stomach and bowels.

Diuretine (East India Medicine Co.), consisting of potassium acetate, buchu extract, a laxative plant drug, oil of juniper berries, sugar, alcohol and water and represented as a cure for Bright's disease and other conditions.

Bloodzone (East India Medicine Co.), consisting of extractives of plant drugs, including a laxative drug, sugar, alcohol and water and represented as a cure for syphilis, cancer, rheumatism, catarrh, boils, psoriasis, pimples and many other conditions.

Grantillas (Eneglotaria Medicine Co.), containing emodin-bearing plant extractives and cramp bark and claimed to be "the best existing uterine tonic", a first class general tonic in anemia and chlorosis and a cure for "Hysteria."

Winslow's Sarsaparilla Compound (Howard Drug and Medicine Co.), consisting essentially of extract of plant material, including sarsaparilla, potassium iodid, glycerin, alcohol and water and claimed to be a reliable remedy for scrofula, chronic ulcers, syphilitic affections, etc. (*Jour. A. M. A.*, May 6, 1922, p. 1407).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act, chiefly because the therapeutic claims made for them were unwarranted:

Compound Fluid Balmwort (The Blackburn Products Co.), consisting essentially of plant extractives, including bear-berry, a large proportion of sodium acetate, alcohol and water.

Whitlock's Child's Laxative (Whitlock Herb Medicine Co.), containing senna, Rochelle salt, sodium salicylate, soda, alcohol and water.

Whitlock's Cough Sirup (Whitlock Herb Medicine Co.), consisting of plant extractives, licorice, sugar, alcohol and water.

Whitlock's Cathartic Sirup (Whitlock Herb Medicine Co.), containing extracts of plants, including jalap, senna, fennel and peppermint, sugar, alcohol and water.

Whitlock's Nervine Pills (Whitlock Herb Medicine Co.), containing plant material, including asafetida, valerian, licorice and an ammonium compound.

Whitlock's Blood Pills (Whitlock Herb Medicine Co.), containing plant material, including red pepper, aloes, colocynth, and scammony.

Whitlock's Female Cordial (Whitlock Herb Medicine Co.), containing extracts of plants, including senna and jalap, alcohol, sugar and water.

Whitlock's Kidney and Gravel Medicine (Whitlock Herb Medicine Co.), containing volatile oils, including oil of sassafras, anise, and turpentine and alcohol.

Red Indian Liniment (Whitlock Herb Medicine Co.), containing oil of turpentine, acetic acid, ammonium chlorid, alcohol and water.

Whitlock's Worm Cordial (Whitlock Herb Medicine Co.), containing plant extractives, including spigelia and senna, glycerin, a small amount of salicylic acid, sugar, alcohol and water.

Whitlock's Nerve Pills (Whitlock Herb Medicine Co.), containing colchicin, asafetida and extract of hops.

Whitlock's Rheumatic Pills (Whitlock Herb Medicine Co.), containing colocynth, jalap and guaiac.

Whitlock's Kidney Pills (Whitlock Herb Medicine Co.), containing copaiba, extract of cubebs, a trace of oil of turpentine and magnesia. (*Jour. A. M. A.*, May 20, 1922, p. 1556.)

BOOK REVIEWS

EPIDEMIOLOGY AND PUBLIC HEALTH. A Text and Reference Book for Physicians, Medical Students and Health Workers. In Three Volumes. Vol. 1. Respiratory Infections. By Victor C. Vaughan, M.D., L.L.D., Chairman of the Division on Mental Sciences of the National Research Council. Assisted by Henry F. Vaughan, M.S., Dr.P.H., Commissioner of Health of the City of Detroit, and George T. Palmer, M.S., Dr.P.H., Epidemiologist for the Department of Public Health of the City of Detroit. Cloth. Price $9. Pp. 668, with 81 illustrations. St. Louis: C. V. Mosby Company, 1922.

This book by Vaughan is, of course, one of the most important contributions to American medical literature. The preface to the work is an outline of Vaughan's own life experience in so far as it pertains to epidemic disease. This is the most interesting and possibly the most valuable part of the book. The author has taken the opportunity to elaborate and develop his own ideas concerning the pneumonias, measles, German measles, small- with respiratory infections. Here we find chapters on albuminal diseases, pollinosis, the acute coryzas, the pneumonias, measles, German measles, smallpox, chickenpox, diphtheria, scarlet fever, mumps, whooping cough, influenza, tuberculosis, leprosy, cerebrospinal meningitis, poliomyelitis and glanders. It is presumed that Vaughn believes that all these infections take place through the respiratory tract—some exception might be taken to this idea.

The largest chapter in the volume deals with Influenza. It is interesting to note that the author's combative measures against this disease amount to practically nothing. He states: "We do not believe that the nose and throat prophylaxis is an effective weapon against influenza"; "The only motive for closing schools would seem to be that it can be done"; "Immunization, both as a preventive and curative treatment of influenza, has been tried, but the success of these measures has not been thoroughly established." The author is exaggerating when he states that "the diphtheria bacillus seems well nigh ubiquitous." Vaughan accepts the theory that the virus of scarlet fever is not contained in the epidermal scales thrown off in desqumation and he states that scarletina is "spread chiefly through fomites."

This book will impress students with the great importance of healthy carriers in the dissemination of respiratory infections.

THE PSYCHIC HEALTH OF JESUS. By Walter E. Bundy, Ph.D., Professor of the English Bible in DePauw University. New York: The MacMillan Company, 1922.

The author is a student of New Testament literature and not a specialist in mental diseases. When he attempts to controvert the allegations of Holtzman, Rasmussen and others that Christ was an ecstatic, an epileptic or a paranoiac he wades in beyond his depth. If one were forced to form his estimate of the psychic health of Jesus on a study of this book he would be forced to conclude that it was, to say the least, questionable. The book represents a vast amount of work and it will find many interested readers, but the Reviewer cannot but wonder as to the nature of the subconscious motive which animated the author.

THE SPLEEN AND SOME OF ITS DISEASES. By Sir Berkeley Moynihan, of Leeds, England. 129 Pages with 13 full page diagrams. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $5.00 net.

This book contains the material upon which the author based the Bradshaw Lecture delivered at the Royal College of Surgeons of England in December, 1920. Pernicious Anæmia, Leukæmia, Hodgkin's Disease, Splenic Anæmia, Hemolitic Jaundice, Gaucher's Disease, van Jaksch's Disease and Polycythæmia are all considered with their relationships to pathological changes in the spleen and the chances of relief from surgical intervention. The author rightly states with emphasis that "instead of searching only for the existence of this or that splenic disease, an inquiry should be directed to the functional capacity of all the organs likely to be deranged." This book should be studied by both the surgeon and the internist.

THE PRACTICAL MEDICINE SERIES. Volume 11, General Surgery. Edited by Albert J. Ochsner, M.D., F.R.M.S., L.L.D., F.A.C.S., Surgeon in Chief Augustana and St. Mary's of Nazareth Hospitals; Professor of Surgery in the Medical Department of the State University of Illinois. Series 1922. Price $2.50. Chicago: The Year Book Publishers.

Ochsner's abstracts and discussions of the surgical literature are now well known and their value is widely recognized. While these books are published primarily for the general practitioner, they have a distinct value for the specialist. The reviewer knows of no book that better covers a general review of the year's surgical literature than does this one.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month). Volume II Number I (The Philadelphia Number) 331 pages, with 145 illustrations. Per clinic year (February, 1922, to December, 1922). Paper $12.00 net; Cloth $16.00 net. Philadelphia and London: W. B. Saunders Company.

The Surgical Clinics of North America are still measuring up to their original high standard. The latest volume, the "Philadelphia Number", has among its contributors Deaver, Frazier, DaCosta and Muller—no abler group of surgeons is to be found in America. We strongly recommend these clinics to all those who are interested in the clinical side of surgery.

ABDOMINAL PAIN. By Prof. Dr. Norbert Ortner. Chief of the Second Medical Clinic at the University of Vienna. Authorized Translation by Wm. A. Brams, M.D., formerly Lieutenant Commander, Medical Corps, U. S. N., and Dr. Alfred P. Luger, First Assistant, Second Medical Clinic, University of Vienna. Cloth. Price $5.00. New York: Rebman Co., 1922.

Ortner is an internist but he deals with surgical conditions in an interesting and instructive manner. He considers a number of conditions which are not usually found in American text-books. Acute deficiency of the adrenals receives attention as an important cause of diffuse abdominal pain with shock. He remarks: "A condition which may cause confusion with general peritonitis is mesoperiarteritis nodosa." The book is replete with diagnostic signs which are unfamiliar to the Reviewer. For instance: "cyanosis of the anal region is a valuable sign in the diagnosis of intussusception"; "muscular rigidity is absent in a perforation of a pyloric carcinoma"; "an early and important symptom in pneumococcic peritonitis is diarrhœa." Speaking of the differentiation between perforative peritonitis and strangulation ileus, the author says: "If the rectal temperature is two or more degrees higher than the axillary, it is an almost certain sign of peritonitis." On page 11 he states: "I wish to emphasize the point that bloody stools are practically never seen in internal incarceration and have no connection with this type of obstruction of the small bowel"—this statement is incorrect. One reads on page 6: "A sign described by Wahl-Schlange's sign may be present," and on page 16 is mentioned "Wahls and Schlange's signs"—the translators, of course, knew what they were writing about.

MEDICAL AND SURGICAL REPORTS OF THE EPISCOPAL HOSPITAL. Volume V. Philadelphia: Press of Wm. J. Dornan, 1920.

"The publication of this volume has been made possible by the establishment of a Publication Fund by a generous friend of the hospital, the late Miss Harriet Blanchard." These Reports of the Episcopal Hospital were not published during the war, so this is the first volume since 1916. Thirty-four authors contribute articles on a wide variety of medical and surgical subjects. But a very few of these articles have been published in current periodicals. It is interesting to note that, despite the large number of contributors, the articles of Astley P. C. Ashurst fill at least a third of the volume. This book will find a place in every medical library that is at all complete.

HUMAN HEREDITY. By Casper L. Redfield, Author of "Control of Heredity," "Dynamic Evolution," "Great Men and How They Are Produced," Etc. Issued April, 1921. Cloth, 112 pages, $1.50. Chicago: Heredity Publishing Company, 1921.

The author does not value the teachings of either Darwin or Mendel. He believes that "powers developed by exercise in one generation are inherited by the next." He states: "In examining the pedigrees of intellectually eminent men I found that those born to fathers more than forty are more numerous than those born to fathers less than thirty." He gives an imposing list of famous men who were born to parents who were at or past middle life. The book is neither expensive nor long and can well be read by those interested in the study of heredity.

NEOPLASTIC DISEASES: A Treatise on Tumors. By James Ewing, M.D., Sc.D., Professor of Pathology at Cornell University Medical College, New York City. Second Edition, Revised and Enlarged. Octavo of 1,054 pages with 514 illustrations. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $12.00 net.

That a second edition of a work of this kind is called for within three years from the publication of the first is at once an evidence both of its popularity and its merit.

The most extensive changes have been made in the chapters on bone tumors and neurofibromatosis. Thirty-four illustrations and twenty-eight pages have been added. New references also have been added.

No small part of the value of this work, like that of its predecessor, lies in the splendid bibliography. The book bears every evidence of being the work of a painstaking, enthusiastic, experienced man and deserves a place in the library of every man interested in the subject of tumors—and all doctors are or should be.

RADIOGRAPHY IN THE EXAMINATION OF THE LIVER, GALL-BLADDER, AND BILE DUCTS. By Byron Knox, M.D., Hon. Radiographer, King's College, London, England. Cloth. Pp. 64 with 64 Illustrations. Price $2.50. C. V. Mosby Company, St. Louis.

Any work that aids in the differential diagnosis of lesions of the upper right abdominal quadrant is of distinct value, hence this brief resume of the anatomical considerations of the area, the pathology and chemical composition of gall-stones together with the results of an experimental investi-

(Continued on advertising p xx)

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BALTIMORE

(Continued from p 220)

gation concerning their absorption coefficients and radiographic appearance, technique of examination, the pathologic gall-bladder, record of cases and some excellent reproductions of skiagrams in illustration, offers a condensed and fruitful source of information to anyone interested in the sklagraphy of this area.

PAPERS FROM THE MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH AND THE GRADUATE SCHOOL OF MEDICINE OF THE UNIVERSITY OF MINNESOTA, covering the period of 1915-1920. Octavo volume of 695 pages with 203 illustrations. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $10.00 net.

Largely this volume is made up of theses presented by graduate students in pursuit of degrees. Some are based on detailed clinical studies of the material furnished by the clinic and others are research in the pre clinical medical sciences. A few papers on subjects related to those discussed by the students are also presented by the faculty. A paper by John L. Busch on Ulcers of the Gastro-Intestinal Tract with Special Reference to Gastro-Jejunal Ulcers is of great practical value to both the internist and surgeon. According to the author, the stomach is an alkali manufacturer or preserver. "A function with which it is not generally credited."

A short article by William J. Tucker on Infections of the Kidney is also very practical. The writer points out the fact that in the treatment of colon infections the keynote of conservatism while in the coccus type of infection only radical surgery suffices.

Charles C. Palmer as a result of studies on the Influence of Partial Thyroidectomy in Pigs concludes that a degree of hypothyroidism insufficient to produce physical changes, markedly lowers resistance and impairs the functions of reproduction.

David M. Berkman in "A Preoperative and Postoperative Study of Diabetic Patients with Surgical Complications" reaches the conclusion that diabetic patients can often be relieved of disturbing and menacing conditions without undue risk by surgical procedures. In the mind of the reviewer the suggestion in this conclusion is timely in that he feels certain that many diabetics have in the past been doomed to suffering and in some cases premature death for want of surgical interference.

A most excellent paper is that by Albert C. Broders on "Squamouscell Epithelioma of the Skin." The paper is based on a study of 256 cases and is profusely illustrated. Of these cases 51.17% were preceded by some blemish such as a scab, wart, ulcer, etc.

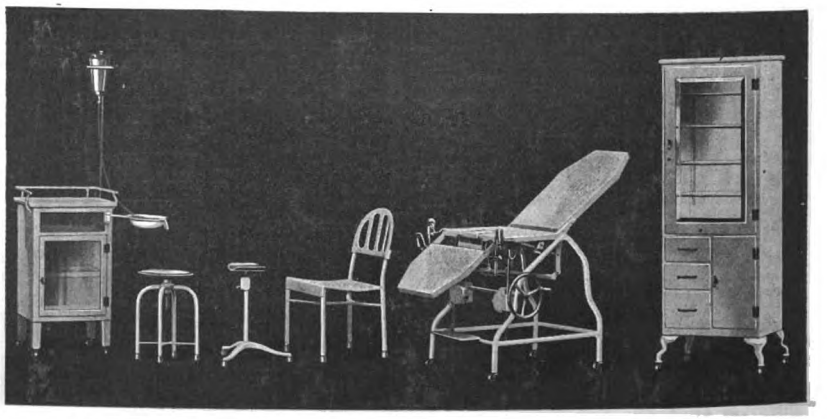
Henry W. Woltman in his paper on "Brain Changes with Pernicious Anemia" concludes that the mental manifestations and terminal delirium in this disease are chiefly the result of the toxin.

Henry W. Meyerding concludes his short article on "Cystic and Fibrocystic Disease of the Long Bones" in part as follows: "Cysts may arise from local or general processes; Giant cells in moderate numbers, especially atypical forms, are not prognostic of malignancy; curetting and crushing in of the diseased wall is usually sufficient surgery; The microscopic picture is clear and should not be confounded with malignancy; The roentgenograph is fairly diagnostic but the history, clinical findings, examination of the patient and laboratory and roentgenographic reports should be included in making the diagnosis."

Irene Sandiford, in speaking on clinical metabolism, expresses the opinion contrary to Goetsch that the reaction after injection of adrenalin is "not indicative of the presence or absence of hyperthyroidism", but that the metabolic rate is the "only accurate index of the degree of hyperthyroidism and of the effect of either medical or surgical treatment of such cases."

A long paper by Lee W. Barry on "The Effects of Inanition in the pregnant Albino Rat" is especially interesting now that child welfare, birth control, eugenics and similar questions are so much in the limelight.

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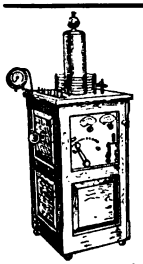
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ORIGINAL ARTICLES

ABDOMINAL TRAUMA*

W. U. KENNEDY, M.D.
NEW CASTLE

The occurrence of traumatism to the abdominal wall without its perforation may and does cause injury to the contained viscera, varying in type with the severity and mode of application of the trauma. The principal type of such trauma is laceration of viscera, with the sequela of hemorrhage and peritonitis. Shock is the primary symptom, intensified by location of the injury above the umbilicus and by the volume of bleeding.

The diagnosis of visceral rupture, with its resultant indication for immediate laparotomy is ordinarily evident or will make itself evident by sepsis beginning in a few hours.

The treatment of such an injury by cleansing out the cavity, repair of injury and drainage needs no comment. It is proper to emphasize the necessity of regarding every considerable abdominal trauma as potentially mortal and wherever doubt arises, or with deepening shock or the beginning of sepsis, to give the patient the benefit of an exploratory laparotomy, the mortality of perforation or lacerating wounds increasing hourly at an appalling ratio.

The writer has observed a different type of traumatic peritonitis, of which there are no descriptions in the literature and which he believes to have been hitherto classed with the exudative peritonitis of sepsis. In a certain though low per centage of abdominal traumatic injuries the patient will quickly recover from the shock, there will be no evidence of sepsis, the pulse rate decreases, neither the red count nor the hemoglobin will decrease, the distension and pain lessen, dullness will not occur, and the whole picture shows amelioration, except that rigidity of the abdomen will persist and a subacute nausea remains. It may be summed up by saying that recovery from the acute symptoms has progressed to the point wherein one feels assurance of safety, but here that recovery halts, and after a more or less prolonged period and generally in a slowly progressive manner, the symptoms of nausea, abdominal rigidity and constipation increase until the picture is either that of acute obstruction or that of toxemia from absorption.

The gross pathologic changes found in these cases is that of an exudative peritonitis with agglutination of intestinal coils producing obstruction either (1) by constriction (by fibrous contraction involving the outer layer of the gut wall only); (2) by acute angulation; (3) loop obstruction by band; (4) mesenteric twist by a relatively heavy mass of adherent gut, aided possibly by fecal contents, turned on its axis by pressure of efferent distended gut; or (5) such a mass falling over another coil as a result of its weight and loss of peristalsis.

In the more acute type of this form of peritonitic adhesion, the serosal adherence is general, the intestine being uniformly and completely invested with a smooth exudate much as though glue had been poured into the cavity.

In the subacute and more chronic type, the adherence while relatively general, is accentuated by the formation of few or many distinct masses, some of which attain such size as to be palpable through the abdominal wall.

In these cases one observes neither adherence of omentum to gut nor adherence to the abdominal wall as is found in septic peritonitis, nor does the exudate break down into homogenous denucleated flakes, nor does the epithelium swell and break down as in sepsis.

This type rather closely corresponds to the acute hemorrhagic form of peritonitis, for at intervals may occur the brownish black dots which, according to Adami, are the result of chemical interaction of the sulphuretted hydrogen of the gut and the iron of blood pigment. But there are not the irregular laminations, nor the evidence of petechial patches, nor the irregular deposit of more or less disorganized clots, nor the deposit of lime salts, nor the early and wide formation of new capillaries. It is clearly differentiated from the chronic hyperplastic peritonitis in that hyalin degeneration does not occur or at least has not been seen after many months.

The sequence of pathologic changes seems to

*Presented before the General Meeting of the Indiana State Medical Association, Indianapolis session, September, 1921.

depend upon injury to the vasomotor mechanism through disturbance of the sympathetic, since there does not appear to be actual laceration of vessels and capillaries. At any event, the primary condition seems to be a congestive hyperemia of the serosa induced by vaso dilation incident to disturbance of the autonomic center. Whether or not there is effusion of leukocytes I cannot say, nor can it be absolutely certain that a low grade infection, not sufficiently virulent to set up an ascertainable septic reaction, exists, though the symptomatology negatives this and physiologic considerations do not require the presence of infection. Following the hyperemia a lymph exudate covers the serosa widely and completely except that it has not been noted on the stomach or the duodenum. The adhesions are smooth and firm, though nearly if not quite bloodless. They have a marked tendency toward radial contraction, but there has not been observed the condition known as peritonitis deformans which finally reduces the gut to a dense ball with the rest of the cavity filled with fluid.

Illustrative cases are Case 1—J. C., banker, age 45, was struck above the umbilicus by a thrown brick. He fell, in great pain and with severe shock which persisted for twenty-four hours. There was a silent abdomen, extreme abdominal rigidity, no temperature rise, little if any tympanites and no evidences of hemorrhage. He then sharply rallied and was apparently recovering without substantial injury, except a persistence of rigidity and moderate nausea. Gas came through after about twenty-four hours and later a fairly free stool. On the twenty-first day, because of steadily increasing nausea, persistent rigidity and the rather typical picture of mechanical ileus, the abdomen was opened, disclosing a widespread adherence of gut with sharp kinking by angulation in several places, so that determination of the actual place of closure was impossible. The coating of adhesions covering all the gut was smooth and fairly dense. There were no adhesions to the omentum or to the abdominal wall. The stomach was not involved nor the upper portion of the jejunum, nor was there fluid in the cavity. An attempt was made to separate the coils of gut by splitting off reflections of adhesions and filling in the gaps with omentum. After a long procedure, a fairly patent canal was obtained with a minimum amount of raw serosa. It was recognized then that adhesions would promptly re-establish. Resection of intestine was impossible and short circuit was impractical. He had complete relief for a few weeks, when the same progression of symptoms occurred and following attempt at short circuit he succumbed to a septic peritonitis. At the first operation the condition was deemed unusual, though not thought to be unique, but reflection and review of the literature impressed us with the belief that it might have been other than a septic type of peritoneal adhesion. At the second operation the conditions were so changed that no opinion could be formed. This man's history was carefully gone into and nothing was ascertained which might have any bearing upon the production of the primary adhesions at any time prior to the trauma.

Case 2—A boilermaker had an air riveting gun discharged while pressed against his upper abdomen. A typical shock of extreme severity followed, with abdominal rigidity and nausea. Following suitable treatment, he improved so rapidly that the idea of a visceral injury was abandoned. He complained mildly of continuing nausea and abdominal rigidity persisting over some three months, at no time being entirely free from discomfort, and latterly having a progressive increase of both these symptoms and of constipation which went on to almost a starvation phase with the evidences of the toxemia of intestinal stricture. In the sixth month a section disclosed almost the precise pathology of the first case; however a number of brownish black spots were seen studding the visceral wall and resembling small ink stains. After a separation of coils Cargile membrane was wrapped about all raw surfaces and suture lines not covered by reflected adhesions or omentum. Strict search was made for evidence of laceration of bowel or disease of organs of the cavity without result. The patient improved for a time, but was again developing the same obstructive symptoms when he died of a pneumonia. A post-mortem was obtained and the viscera removed. In no place could microscopic evidence of laceration extending through the wall be found nor any area of old hemorrhage with remnants of blood clot or pigment. The adhesive membrane had apparently obliterated all but traces of the serosa and few capillaries were found. The adhesive membrane was a fibrous sheet seemingly causing radial compression.

A third and fourth cases are not reported, for while the finding were much the same, a history of previous disease was obtained and definite local evidence was present of a previous septic peritonitis. And in each of these the outstanding symptoms were of abdominal trauma with shock, nausea and rigidity, the shock subsiding and the nausea and rigidity persisting with gradual evidence of intestinal obstruction. It seems quite possible that the previous condition had nothing to do with the peritonitis found, yet they are deleted because of the past history. In one case a mass of adherent gut was removed with recovery, the patient being finally lost sight of. In the other a short circuit was done with death from exhaustion and sepsis.

Case 5 was a young soldier struck in the abdomen by a piece of H. E. The usual symptoms of shock were present. After treatment in a

shock ward, he was sent back to my base hospital. Here the persistence of nausea and rigidity drew my attention. A fluoroscope being available, considerable study was done. Previous peritoneal disease was negatived by the history. The immediate case history after the injury was necessarily sketchy, but nothing in the record indicated sepsis or hemorrhage. Barium meals disclosed a normal stomach with emptying time of four hours, a normal cap but a hazy, illy-defined shadow of barium in the small gut, movable to some degree and with marked delay in reaching the cecum, and persistent retention in the gut. The colon showed no abnormalities. A section was done for the progressive toxemia and nausea and a short circuit. He was returned to the United States within a month in good condition. No information is available as to the later course of the disease and letters to him since have been returned.

It appears then that trauma may, by its action on the sympathetic, set up a type of peritonitis, non-septic in character, relatively slow in development but capable of producing almost irremediable damage. The diagnosis rests upon a history of abdominal trauma, with shock which is soon ameliorated, a persistent abdominal rigidity which continues after the patient should be free from symptoms, a persistent nausea, a more or less fixed doughy mass, obstinate constipation increasing in severity, a nearly silent abdomen with peristalsis abruptly terminating at a fixed place, when it can at all be elicited, and a gradual toxemia from intestinal stasis. The x-ray will show an illy-defined mass of barium in the small gut, usually somewhat movable, with definite delay in the head of the meal reaching the cecum, without the definite outline of a diverticulum and with a larger outline than a diverticulum, the colon showing no abnormality. Here parenthetically I may add that I have been impressed with the value of auscultation in this as well as other types of visceral trouble. It will reveal evidences quite equal to that gained by percussion or palpation and in this as well as other forms of obstruction, the silence is truly significant. In certain phases it is permissible to use small injections of pituitrin to emphasize blocking of peristalsis.

In the acute types an immediate laparotomy is indicated to establish the pathologic condition and to do such form of repair as will re-establish the fecal current. The widespread adhesions may be dissected loose and used to partly cover raw surfaces, supplementing these with omental flaps and Cargile membrane.

In the more chronic types a re-establishment of current would be difficult and in such instances short circuiting will be indicated and even re-section of masses of agglutinated bowel.

The possibility always exists of stretching of the adhesions and so long as obstruction does not exist to the point of closure, a waiting policy seems best. At least in my cases so little has been possible through intervention and the extensive operation so formidable that I would if possible defer operative procedure in these chronic types.

It had been my intention to discuss at this juncture certain other abdominal conditions such as appendicitis and hernia and they were announced in the printed syllabus. They are, however, reserved for another time.

The conclusions of these observations are:

1. That abdominal trauma may set up a type of peritonitis resulting in a pure form of generalized adhesion and without demonstrable laceration of intestine.

2. That as a result of such peritonitis an agglutination of bowel may occur resulting in varied form of obstruction.

3. That such a peritonitis may occur without intervening sepsis.

4. That such a peritonitis may be clearly differentiated from the septic type or the hemorrhagic type or the chronic hyperplastic type.

5. That such a reaction may be accounted for by damage to the autonomic center.

6. That a trauma followed by persistent rigidity of the wall and continued nausea is indicative of this type of peritonitis.

7. That such a group of symptoms plus acute obstruction or the increasing toxemia of stasis necessitates exploration.

8. That unless obstructive and toxic elements are definitely present and ominous a waiting policy is advisable.

9. Finally, in medico legal cases, an abdominal trauma, with persistent symptoms as herein described, may be regarded as a causative factor for the purpose of fixing liability.

DISCUSSION

DR. W. P. WILLIAMS (Lebanon): I quite agree with the doctor's general remarks that in acute abdominal trauma we should obtain early abdominal section to be sure of the conditions inside. As to the conditions which he has described, I have never seen a case. If I have I did not know it. When we have such a case presented to us of course the question is what to do with it. Since this trauma seems to be interfering with the nerve supply of the abdominal organs, probably any major interference in a surgical way to correct angulations, adhesions, etc., would be largely meddlesome surgery, because of the fact that the nerve supply to these organs is already so traumatized that we increase the trauma by surgical interference, and we may convert the case into a septic condition.

I am sorry I have not had the opportunity of seeing a case of this sort, and yet since the outlook for the patient is so gloomy perhaps it is well that many of us have not seen these cases.

I want to congratulate the doctor upon this original observation and report of cases of this kind.

DR. W. U. KENNEDY (closing): I want to say that the precise type of case in which this occurs are those in which we do not do a simple laparotomy, as the patients are apparently getting well and everything going smoothly. It is only after weeks and months that this condition develops, and then the question arises as to the primary cause. It is to put this particular type on record that I have read this paper.

STERILITY IN THE FEMALE*

G. B. JACKSON, M.D.
INDIANAPOLIS

Sterility may be broadly defined as that condition of the organism which renders the individual incapable of reproduction, although the term is usually limited to the impossibility of conception. The condition may be primary, absolute or idiopathic on the one hand, or secondary, relative or acquired on the other, and is of about equal frequency in the two sexes, this being a point of no little importance in practice as we shall later emphasize.

The essentials for fecundity in the female are: a normal ovum and a genital tract permeable to and not inimical to the spermatozooa, and physiologically fitted as host to the fertilized ovum for its transit, its implantation and its development in normal *situ* to viability. Given these conditions, and the deposit of normal male cells upon the vulva is sufficient to produce pregnancy.

Any condition which will impair these essentials of fecundity may produce sterility, *i. e.*, sterility in the broad sense of incapacity of reproduction. Such causes, as we have already mentioned, may be "idiopathic" or "acquired".

Graves[1] has written exhaustively of idiopathic sterility, and discussing "infantilism" in this relation says:

"Fetalism, a term introduced by Alfred Hegar, relates to a faulty or arrested development in intrauterine life, and is represented by conditions of aplasia, such as the absence of the vagina, uterus, ovaries or tubes."

The futility of medicine and surgery in these cases is self-evident.

Of "infantilism" he further writes that, as the term is used, it "presupposes that the individual has been born with a full equipment of genital organs, without mechanical obstruction to fetation, but that during childhood an arrest in development takes place so that in the childbearing age the organs retain certain characteristics of the prepubescent period."

This arrest in the development may be of the genitals alone in an otherwise normal individual, or it may be a part of a general hypoplasia or arrested development.

The same author says, as to the interesting question why infantilism is more common in women than men, that "the sexual apparatus of woman is so much more complicated than that of man that the chances of hypoplasia are very much increased", and quoted Hans Bob that "In general habit, in constitution, and in general mentality woman is half-way between man and child, and hence a certain amount of infantilism may be regarded as physiologic".

From the same source we read that if the infantile or hypoplastic ovary "be examined microscopically it will be found often that most of the follicles have not developed beyond the primordial state, and that there is a marked increase in connective tissue, as manifested by the thickened albuginea". According to Kehrer, this lack of development of the follicle apparatus accounts for the defective function of the ovaries on the ground of the late onset of menstruation, the frequency of amenorrhea and dysmenorrhea, of sterility and failure of sexual impulse, and vicarious menstruation.

Without discussing ovarian physiology at length, we may recall that the defect in ovulation has been explained on a mechanical basis, believing that the developing ovum either meets with too great a resistance from the thick albuginea, or has an insufficient internal fluid pressure of its own.

As for the role of the Fallopian tubes, W. A. Freund, the founder of our present knowledge of infantilism, describes the tubes of infantilism as being similar to those of the new-born in that they are "markedly twisted in a spiral form, especially at the uterine ends", and Bumm calls attention to a hypoplastic condition of the fimbriated structure. However, the infantile uterus is the most important structure in this subject and occurs in two distinct forms:

First, and very infrequent, the generally dwarfed or atrophic organ with normal proportions; second, the true type, of frequent occurrence, and presenting a narrow, short corpus with a relatively much elongated cervix and, as a rule, a marked flexion either anteriorly or posteriorly. At the point of angulation a cicatricial band has often been described, which Bumm has styled "callous stenosis" of the cervix. He is of the opinion that it is an important factor in the prevention of conception. (Graves.)

Involving, as it does, the various atresias of the tract, the vaginal defects which cause "*effluvium seninis*" (which cannot *per se* be considered a cause of sterility), the various toxemias and the fascinating problem—complex of heredity—surely the subject of infantilism itself

*Presented before the General Meeting of the Indiana State Medical Association, Indianapolis session, September, 1921.

1. Graves: Textbook Gyn.

is of sufficient theoretic interest to occupy the short time allotted for this presentation.

Of far greater importance, however, from a practical standpoint, is the acquired form of sterility. It is a deplorable fact that gonorrheal infection represents far and away the greatest causative agent in this class of cases. While statistics vary greatly as to the role of the gonococcus in this relation, we may judiciously accept the average statement of such authors as Neisser, Sanger, Findlay *et al.* that the gonococcus is active in at least 30 percent of cases. The adnexa need not be involved in order to produce sterility, for the condition may be due solely to the common endocervical gonorrheal lesion, although the adnexal extension is the usual pathologic cause, as so often seen in secondary sterility following childbirth, abortion, or mechanical interference in a subject of gonorrheal endocervicitis.

The mere mention of these facts impels me to digress a few moments in order to emphasize the culpability of the male as regards sterile marriages! Not only does he represent an equal part of the incidence of sterility, but he has been the infecting agent in the vast majority of gonorrheal wives. The indictment, however, does not rest here, for we must add thereto the cases due to syphilis—a not inconsiderable proportion of unfruitful wedlock!

In Leopold's Clinic, 25 percent of puerperal sepsis is gonorrheal. Puerperal infection of non-gonorrheal origin may also destroy fecundity, but not with the frequency of gonorrhea, for the tubes are much less often involved, although the endometrium is more often attacked. We know little, however, of true endometritis and less of its relation to sterility, excepting the very important endocervicitis. This is a frequent result of non-gonorrheal sepsis of the childbed and a potent and tractable cause of sterility. The condition may be readily corrected by the removal of the "plug of mucus" with gentle curettage and appropriate treatment.

Of auto-intoxication, Reynolds[2] says:

"My experience has not furnished me with conclusive evidence that general autointoxication from distant lesions is by itself a sufficient cause for sterility, most of the cases presenting hostilities in the secretions which required considerable local treatment, and which might have been due to other causes than biochemical alteration from disturbed health due to autointoxication; but the cumulative presumption derived from numerous cases leads me to accord much practical weight to this probability and to consider it important to eliminate all such conditions in the management of cases of sterility. This conclusion is reinforced by the experience of both experimental and commercial animal breeders that both good general condition and proper diet are essential to fertility, in both sexes. Animal breeders are emphatic about the advantage of a glossy coat, a clear eye, animated temper, etc., in breeding animals. These correspond, of course, to good complexion, bright eye and the general results of conditions of good elimination in the human race."

This, with the proper knowledge of the physiology of the sexual life and good sex hygiene, is very important. That many sterile women know nothing of sexual feeling is a matter of general knowledge.

Among other important and generally unrecognized causes may be mentioned:

Biochemical vaginal hostility, usually of bacterial and hyperacid origin; cervical hostility, as before mentioned (inflammation with acidity and mucous plug), and the tubal conditions so carefully studied by E. Ries and Reynolds.

In this latter connection I may emphasize the importance of a careful study of the normal flora and the chemical reaction of the genital tract in order to recognize and treat the deviations from the normal. This is certainly an important part of so-called "office" or "medical" gynecology. That much of the chemico-physiologic process in fecundation is beyond our ken no one will deny, and while many of this class of cases are therefore beyond our powers of cure at the present time, a careful and painstaking study of every case should nevertheless be undertaken.

Among the other causes of acquired sterility we may mention, with brief comment: genital tuberculosis and genital tumors (and here the peculiar primary sterility of the myomatous uterus is to be remarked, standing as it does in contrast to the others which act merely by their mechanical presence or by ovarian involvement). Many constitutional diseases and also chronic poisonings by different drugs produce sterility through intoxication of the germ cell, as do also the x-ray, radium, etc. Consanguinity and racial intermingling reduce fertility, and there are also cases which go to show that there may be an individual incompatibility of the germ cells. (Napoleon and Josephine present a classical example—she having had two children by a previous husband, he having one by a later wife, though they were together sterile.)

Malpositions of the uterus are not infrequent causes of sterility, and particularly is this true of the congenital types. Acquired retroversion may also tend to prevent conception and to produce abortion.

Finally, let us not forget therapeutic sterility as noted, for example, in the tuberculous, insane, eclamptic, thyrotoxic and other subjects.

In considering the care of this condition it would appear that the cases of congenital defect, *i. e.*, infantilism and fetalism, presenting as they do an impossibility of correction, are nevertheless due to preventable causes and therefore of

2. Reynolds: A. M. A., Oct. 11, 1919.

marked sociologic interest. The writer has in mind the well-known relationship of psychoneurotic defects (epilepsy, insanity, etc.), syphilis, alcoholism, and other chronic toxemias in the ancestry, to defective development (infantilism) in the progeny.

Naturally, the acquired forms of sterility are much more susceptible of prevention. Thus we are led to touch upon the field of moral and social matters, a field as yet almost untilled; that of genital disease prevention and the greater vista of moral and health teaching, eugenics—the great public health and educational problems.

In this connection permit me to call attention to the importance of "better obstetrics" in relation to this phase of the topic of sterility: *e. g.*, first, the influence of the prolonged pounding of a protracted second stage of labor upon the head of the child, resulting in brain injuries, psychic defects, epilepsy, etc. (when not kind enough to kill). The same is true of unskilled or extremely difficult forceps deliveries. Furthermore, and not less important, are the injuries to the mother which produce acquired displacements, erosions, etc., which when neglected in the puerperium cause sterility, as do also the childbed infections. Time does not permit a detailed discussion of obstetric care in this relation, yet we must impress the point that prenatal, parturient and postpartum treatment are in direct relation to the subject, and that "better obstetrics" should reduce these unfavorable results to a minimum.

Reynolds says: "Mistakes in the management of the marital relation are not infrequently by themselves a sufficient cause of sterility, usually by production of congestion and its results. Such mistakes in marital life are not usually perversions. They may even appear trivial, and yet if long persisted in produce important results or even changes in the organs which may demand operative treatment before pregnancy can be obtained. It is very disappointing for patients to travel, perhaps long distances, to see a specialist only to receive directions to try a change of habit and if this is unsuccessful to report again. This is a very frequent cause of sterility which the general practitioner ought really to be capable of detecting and correcting, so far as change of habit is concerned, before sending his patients away."

Following this statement he offers many helpful suggestions as to the difficulty of eliciting a history from these patients, and calls attention to the general lack of knowledge on the part of the general physician as to the injurious practices in preventing conception and the defects in cohabitation which tend to cause chronic congestion of the genitalia, and in conclusion says:

"This subject is evidently too complicated for brief discussion; but adherence to the principle that excitation without orgasm is a frequent cause of local disturbance and consequent sterility furnishes a safe guide for questions. When any one of these or other mistakes in coitus is remedied before it has been of long continuance, the mere correction of habit, or such correction in connection with minor local treatment, frequently yields a prompt pregnancy. When, on the other hand, the congestion which results from such habits has been long persistent it has not infrequently produced changes in the prostate, deep urethra or vesicles, or in the cervical or uterine mucous membrane, and even in the ovaries, which may require long continued treatment or even an operative correction before pregnancy can be secured."

Of signal importance in our work along this line is the endocrine system. Bandler[3] deals at length with this phase of the subject in his recent treatise and says in part, that menstruation is a constitutional affair associated with premenstrual phenomena, these latter being due not alone to ovulation, "but to the associated altered activities of the thyroid, the adrenals, and the pituitary gland, especially the posterior lobe". Further, that "the general symptoms of this recurring premenstrual period always show which of the endocrines is or are stimulated or inhibited, and thus the unstable member or members of the chain are disclosed".

While most of us will admit that we cannot as yet accurately define and deal with these broken links in the endocrine chain, nevertheless we can do much to determine the general classification of our cases and treat them accordingly upon a more rational basis. There is no doubt, as Bandler insists, that the majority of this class of cases, which he is pleased to term "curable", are subjects of relative uterine hypoplasia (I believe one might better say genital hypoplasia).

Now we have come to believe that the ovarian substance, the thyroid, the adrenal cortex and the anterior lobe of the hypophysis are certainly in close relation to the development and function of the genitalia, *i. e.*, a trophic relation. Furthermore, it would appear that the posterior lobe were in a close relation to dysmenorrhea, and that the placenta were in direct apposition to this pituitary activity.

Reasoning along these lines Bandler has treated this class of cases medically with good results, and rightly suggests the advisability of giving this form of therapy a thorough test before determining upon the surgical measures so often and possibly erroneously employed, viz., curettage, tracheloplasty, etc. He has published an interesting series of cases in "The Medical Clinics of North America" (II, 4) which though too small a number to permit of final conclusions, yet certainly go to show that

3. Bandler: **Textbook on Endocrines.**

"gland therapy" has a place in the study and care of sterility.

Duncan[4] has pointed out that in women "the age of marriage is the chief factor in the expencation of sterility" and that "fecundity is greater in women who have married between the ages of 20 and 24 years and decreases progressively to the menopause". He says that 95 percent of 1800 such wives bore a child within three years and "none proved sterile". While this latter statement cannot, in the face of the congenital conditions and the infections before marriage, be unreservedly accepted, nevertheless the figures suggest great possibilities along the lines of eugenics.

Omitting, for lack of time, detailed discussion of the purely mechanical and surgical considerations in treatment, I desire to mention the following points:

Proper surgical procedures for conditions of the abdominal organs should be done. They may be futile as to fecundity, but even so the pathologic condition is corrected, *e. g.*, misplacements and tumors of the uterus, cystic ovaries, salpingitis, etc. (Child[5] has published a very encouraging report of surgical cases.) The cervix should be cared for in all cases where it shows abnormality. The treatment will vary from simple dilatation and gauze packing for 24 to 28 hours to the Schroeder operation or amputation, depending upon the condition found. Solomons[6] believes that the cervix should be dilated in all cases of sterility.

There is at present some work being done (more or less experimental) along the lines of testing the patency of the tubes with oxygen, carbonic acid gas, or air. Artificial insemination, in cases of cervical interference, has been successful in some instances. Dickinson[7] has recently described an improved technique for deep or tubal insemination. This presupposes potency in the male, which is just as necessary as potency in the female, and which should be established in all cases before attempting to investigate the woman's fecundity.

To summarize, we would enumerate the following points of importance:

1. The role of the male both as to his own condition and his great responsibility as a causative factor in sterility in the female.

2. The vast scope of study necessary in all cases, embracing the entire field of genital and endocrine physiology and pathology, congenital and developmental defects, systemic intoxications, and even "mistakes in the management of the marital relation".

3. The wide field of preventive care, including eugenics, moral education and "better obstetrics".

4. The prognosis in general is good in young individuals and less so with increasing age and years of fruitlessness, but every case has a right to the best possible opportunity which care and skill can afford.

DISCUSSION

DR. ORAN ARNOLD PROVINCE (Franklin): At the outset it is well to remember that in all sterility of the female we must always test the male. Having ruled out the male it is essential to enter upon the examination of the female in a systematic manner. Here we may find upon inspection a urethral caruncle, tumors of vulva, deformities of vulva, gonorrheal warts, gonorrheal discharge, etc., either of which might interfere with proper sexual intercourse. We next should note the condition of the vagina with reference to tumor, stenosis, vaginal malformation, or vaginismus, that latter producing dyspareunia. It is very important to test the vaginal secretions and also the cervical secretions, because as you know the spermatozooa can only live four or five hours in the acid secretions of the vagina, while in the alkaline secretions of the cervix they have been known to live from one to seven days. Oftentimes we will find a plug of mucus in the cervix that causes trouble. In noting the reaction of the secretions of the vagina and cervix we may find that there is some erosion of the surface present, and this should be corrected, either by [illegible] or operative methods. An operative procedure which many follow is the amputation of the cervix in certain conditions. Some operators claim that they get best results from amputation and that sterility is not present in those who have been operated upon as often as those who have not been. And we have those on the other side who say that amputation of the cervix is not productive of propagation.

The next thing to be considered is the efficiency of the os. It is not uncommon to find a pinhole os either externally or internally. If the os is small it is very important that it be dilated and kept dilated in order that there may be free passage of the spermatozooa into the uterus.

We next examine the uterus by bi-manual palpation and sometimes find a large, soft, boggy uterus. In other words, a condition usually termed endometritis. This may be from faulty obstetrics, or from some source of infection, as gonorrhea, or from displacement of the uterus. It is not at all uncommon to find a retroflexion of the uterus, and as you know this is productive of sterility and should be corrected. In the condition of endometritis it is very necessary to curette the uterus and in all of these curettages it is important to use strict asepsis. Otherwise we may do more harm by spreading the infection. If the uterus is retroflexed there may be noted at the point of flexion

4. Duncan: Quoted by Burrage.
5. Child: Amer. Jrnl. of Ob. & Gyn., Dec., 1920.
6. Solomons: S. G. & O., Feb., 1920.
7. Dickinson: Amer. Jrnl. of Ob. & Gyn., Dec., 1920.

adhesions which make it almost impossible for the spermatozooa to get by. These conditions of retroflexions of course should be treated by the proper surgical procedure—as shortening of the round ligament, or whatever method you are in the habit of using.

At this point we must bear in mind fibroid and myomatous tumors, also such deformities as the bicornate uterus, the double uterus, etc., and last we must keep in mind the infantile uterus, which I think is rather common. I have noted this condition in a few instances when I have operated upon a patient for some other condition, the history of the patient having been that she was sterile all her life.

The next thing to note is the condition of the tubes, which may be large and inflamed, as in the different types of salpingitis. The most fruitful cause of salpingitis, as you know, is gonorrhea, which causes an inflammatory condition of the tubes and adnexa, the pelvis is oftentimes a mass of adhesions, so that it is difficult to differentiate the various structures. Some maintain that these cases of salpingitis can be benefited very materially by proper surgical procedure; but my own experience with gonorrhea, when it involves the tubes and surrounding adnexa, is that it is impossible to separate and correct all these conditions so that the patient will be able to bear children.

We should also note whether patients have a constitutional disturbance, like syphilis. Unfortunately, syphilitics are fairly productive of children. We note that people who are fleshy, who are extremely adipose, are in many instances sterile. In this class of cases proper diet should be given, and at the same time it is highly recommended that we give extract of lutein, thyroid extract, or ovarian extract. Many claim exceedingly good results, especially in these adipose women who have little or no flow at the time of their periods.

I think it would be wise for all of us physicians and surgeons to bear in mind that we should report all cases of gonorrhea and syphilis to our boards of health. If we do we will lessen the sterility 30 or 40 percent by getting these cases which are too poor for private treatment under the supervision of the boards of health where they will receive proper care and treatment.

DR. O. G. PFAFF (Indianapolis): It can be truly said that sterility is a question of seed and soil. We can do practically nothing to modify the seed and can only hope to correct a deficient soil. We may hope to correct certain abnormalities which operate to prevent, either ovulation, fertilization, or uterine tolerance of fetal growth.

Labhardt has investigated the connection between vaginitis and other disturbances of the pelvic organs and a very frequent coincidence was noted. In his opinion so-called vaginitis is undoubtedly extensively dependent upon ovarian dysfunction. Gonorrhea was excluded in all of his cases as far as possible by bacteriological examinations. Among about 200 cases at his disposal there were only a few without some factor (elicited in the history or demonstrated in the examination) indicative of ovarian dysfunction in the widest sense of the term. Vaginitis was repeatedly observed in connection with sterility. It is possible that not only a direct dysfunction, but a general disturbance of polyglandular cooperation is responsible for the onset of vaginal disturbances. This relationship between ovarian and vaginal disturbances it is suggested may be due to entrance of abnormal ovarian substances into the blood, or to an abnormal increase in the blood of normal ovarian products, or to an absence in the blood of those ovarian products which are normally present. Again, any combination of these factors is also to be considered as a possible factor in a special case.

Recent investigations have established an extensive influence of the ovarian function upon the uterine mucosa under various circumstances. Vaginitis is frequently combined with hypernutrition of the endometrium. Such cases are not purely local, but must be regarded as primarily referable to some disturbance of the endocrine ovarian function resulting in a change in the blood supply of the vaginal mucosa. Sterility may readily be thus assigned in certain cases of this form of so-called endometritis and vaginitis.

Sturmdorf in referring to the study of endocrinopathic sterility states that we must begin and end with the development and function of the ovary as a link which is reciprocally dominated by every other link in the endocrine chain. The domination of the endocrines on the functional activity of the ovaries manifests itself from fetal life throughout the reproductive period to the menopause. On the other hand, he states that just as the determination of sex is decided in the ovum before fertilization, so the future sterility or fertility of the individual is frequently an ovular preordination and is not governed by the laws of endocrinology.

Sturmdorf concludes with the statement that when we know *how*, *why* and *when* each of the internal secretions sitmulates or inhibits the ovarian function, then will the endocrine treatment of sterility merge from pure empyrism into a rational practice. When all is said that can be said to-day of the endocrines in sterility, the entire subject may be epitomized as a treatment in a condition of which we know little by a means of which we know less.

Many cases of sterility are of a purely mechanical origin. The ovum may be unable to

break through the thickened inflammatory peritoneum which imprisons it, or the occluded Fallopian tube refuses to permit its passage, or the abdominal mucosa of a disordered uterus refuses to tolerate the impregnated ovum and permit its normal development.

Our efforts to be successful must be directed to the correction of such evident defects as present themselves in certain cases. Many cases are very simple—a contracted cervical canal. Here a simple dilatation under anesthesia will often result in prompt fecundation. This result I have been able to achieve in a goodly number of cases.

In one case of pelvic infection and apparent sterility I removed a right pus tube and a left large cystic ovary. I then stitched the remaining right ovary into fairly close proximity with the left tube. This patient became pregnant soon afterwards and went to full term.

As a rule I believe that very little is to be expected from opening up occluded tubes. They soon close again in spite of the best care in suturing. I have tried this in numerous cases and have so far failed.

The correction of backward displacement very frequently is followed by impregnation. Occasionally the removal of a fibroid tumor, or other neoplasm, either from the mucous or serous side has resulted in a cure of sterility.

Brun tabulates 300 cases of sterility from all causes and it is interesting to note that about one-third of these patients suffered from the effects of gonorrhea, which at least suggests the possibility of a more or less efficient prophylaxis through educational efforts.

SOME ASPECTS OF RECENT SURGICAL PROGRESS*

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In considering surgical advances of the last three years one is at once impressed by the fact that nothing new of epoch-making importance has been done, but there has been an unusual amount of benefit derived from experience which will undoubtedly be of much value in the actual practice of men who are progressive in their surgical work. By this time the worth while has been sifted from the chaff of the enormous amount of war material.

Anesthetics have played an important role. There is to be seen in the literature an increasing number of references to local anesthesia. Farr, of Minneapolis, is a foremost exponent of major operative work under local anesthesia. In almost every conceivable surgical operation he has made use of it. A special apparatus which facilitates injection, the extreme patience and gentleness necessary for the best results, and almost complete absence of post-operative discomforts and complications make operative work under this method highly successful. Gas-oxygen anesthesia in conjunction with local anesthesia as expounded by Crile is daily having a wider range of usefulness. Its use by Crile in every phase of surgery has popularized it generally. It is, however, the experience of most men that its use in the upper abdomen is decidedly limited, except possibly in the operation of gastro-enterostomy where much of the work is done outside of the abdominal cavity. The inability of securing good relaxation and the necessity of an expert for administration are its two great limitations. Stanley has pointed out a wide range of usefulness enjoyed by spinal analgesia in upper abdominal work. He reports sixty-eight cases with no difficulty in securing absolute relaxation of the abdominal walls, no shock, and scarcely any vomiting. The great value of spinal analgesia in work upon the lower extremities and in superficial operations such as hernia, and hydrocele, has long been recognized, especially for use in the aged. It is not, however, without its dangers. The synergistic action of morphine and magnesium sulphate as demonstrated at the Presbyterian Hospital in New York and described by Gwathmey, promises to give better and safer relaxation than has heretofore been obtainable, regardless of the type of anesthesia, but especially that of nitrous oxide in conjunction with oxygen.

The matter of abdominal incisions commands some interest. The war demonstrated every kind of wound of the abdominal wall that required in many instances bizarre and unusual incisions for proper work. Every man of experience in this work found no greater number of herniæ following these cases and no crippling of the abdominal wall from the incision of muscle and fascia in all directions and planes. The conclusion is drawn that the old ideas of adhering closely to orthodox abdominal incisions are fallacious, and unnecessarily cramp the operator in his field. Farr has recently called attention to the trans-epigastric and trans-rectus incisions for work upon the stomach and gall-bladder—an incision widely used in the clinic at Lakeside Hospital in Cleveland. Tymmis has discussed the question of the choice of incision in acute abdominal conditions. Here undoubtedly the incision paralleling the right costal border and dividing the right rectus transversely and continuing downward parallel to the outer rectus edge is the one of choice. It easily permits general exploration, for through it the colon, pylorus, almost all of the stomach, head of the pancreas, gall-bladder, gall ducts, right kidney, duodenum, appendix and right pelvic organs can be examined and operated. It is truly the

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most generally useful incision known for the abdomen.

The treatment of peritonitis has lately attracted attention because of some remarkable results obtained at Crile's clinic. His method of treatment he insists upon in a very definite and detailed way. Through his method, out of a series of 13,415 laparotomies, he has reduced his mortality in cases of acute appendicitis alone by over 67 percent. In a personal communication he recently stated that he no longer fears any but the streptococcus types of peritonitis. Briefly his method of treatment is—

(1) Adequate surgical drainage under anociation.

(2) The sitting position continuously from the time the diagnosis is made through the operative and post-operative course.

(3) Vast hot packs over the entire abdomen extending from the nipples to below the groins and well to each side, maintained *hot* twenty-four hours out of the twenty-four.

(4) Assimilation by the patient of at least 4000 cc. of normal salt solution subcutaneously every twenty-four hours.

(5) Morphine hypodermically until the respirations are between 12 and 14 per minute, which rate is to be held until the patient is out of danger.

Supplementing these specific factors are others such as an accurate clean cut operation done with sharp dissection and gentle manipulation and the free use of gastric lavage post-operatively. The use of Fowler's position, heat, morphine, and fluids is nothing new in regard to the treatment of peritonitis, but used in the above prescribed specific way they almost assure the recovery of any but a streptococcus variety of peritonitis, in Crile's experience.

Work upon the origin and nature of malignant tumors has still failed to throw any light of striking importance on the subject. Ochsner has lately urged that every precaution be taken against cancer infection, although its infectiousness as yet be unproven, and has called attention to its occurrence almost exclusively in situations in the body exposed to outside irritation. Pennington's recent article summarizing old and new theories concerning cancer represents an immense amount of work. Starting with Adam's parasitic theory in 1801 he calls attention to a wide range of supposed causes as a manifestation of systemic disease and hence to be treated by mercury, hemlock, venesection, infection with malarial blood and even syphilitic blood; also rheumatism, tuberculosis, being a first-born child, thyroid overwork, high temperature of food, drinking unboiled water, alcohol, excess of salt, and so on. Some theories are genuinely amusing as when Schüler's much-talked-of golden yellow organisms proved to be cork cells from the material in which the specimens were mounted. Pennington seriously questions whether there is an *only* cause of malignancy but believes, with Rohdenburg and Bullock, that the wide distribution of cancer in nature speaks for the possibility of its being dependent on general biologic phenomena. As Bashford points out, even the lowly oyster can harbor a genuine cancer.

Blood transfusion is daily becoming a more useful and more used surgical operation. Compatibility tests of the blood of the donor and recipient are imperative, and disregard of this step is nothing short of criminal negligence. Without doubt the citrate method attracts by far the greater number of adherents. It is easy to do technically, it requires practically no special apparatus, it does not involve the destruction of a vein in donor and recipient with the necessity of local anesthesia and a minor operative procedure—the vein is merely punctured with the needle and is not destroyed by tying off. Haste and speed are not necessary because coagulation is not to be feared. Lastly, and most important perhaps, is the ability by the citrate method to transport the blood from donor to recipient. In other methods the donor and recipient must be in the presence of one another. By the citrate method with perfect ease and safety a recipient may receive the blood from a donor 100 miles or more away. A sufficient number of investigations have shown that the amounts of citrate used are so small they play no role whatever in the chemical and clinical properties of the recipient's blood. According to Richet, Brodin, Saint-Girons, Lewisohn, Pemberton and others, harm from this method of blood transfusion is due to either a too rapid injection or a too great quantity given at one time, both of which factors would hold true in any other method. The incidence of chills following the citrate method may be somewhat greater than by other methods but the method is not accompanied by any mortality or much additional morbidity, according to the recent reports of 100 transfusions by Fleming and Porteous, 200 by Lewisohn and 1036 by Pemberton.

The subject of post-operative parotitis has attracted the attention of several writers, notably Collins and Deaver. This rather serious complication follows ordinarily abdominal operations upon the female. Prophylaxis by means of cleaning and keeping the mouth moist, hypodermocylsis, chewing paraffine, etc., often fails and infections follow. The usual treatment consists in free incisions and packing with moist gauze. This is not always satisfactory. Crile recently has found that crucial incision of the posterior capsule of the gland cures most cases. This incision is made by sense of touch entirely and is necessarily a delicate procedure because of important posterior structures that might be harmed. The resulting relief of pressure with

good drainage established rapidly terminates the inflammation.

Thyroid surgery continues to play a leading role in major operative work. As Ballin has pointed out the outstanding question concerns the *correct* treatment of the many cases of exophthalmic goitre. A patient whose thyrotoxic symptoms have developed in a goitre of some standing (the so-called secondary type) can be operated in a radical way with almost certain safety even though running a high pulse, but not so with the patient whose toxicity has developed with her goitre from its onset. Preliminary ligation is unquestionably indicated as a precursor to radical operation—a point which, as Lahey forcibly asserts, need not be drummed into the experienced operator because he has long ago learned his lesson by a disheartening mortality following primary operation. The Mayos consider a ligation not only a preparation toward radical operation but as a means of judging the patient's ability to stand further work as evidenced by their reaction to one or more ligations. Instead of ligation Ballin uses a continuous suture through the gland substance in an effort to cicatricize the tissue. He finds this usually curative and accompanied in over 200 cases by no mortality whatever. Refinements in technique have largely done away with injury to parathyroids and recurrent laryngeal nerve and with laryngeal huskiness. Lobectomy versus partial lobe resection is still a much discussed question with perhaps a preponderance of favor at present being with the adherents of the partial resection operation. It undoubtedly protects the posterior structures best, gives a better cosmetic result, and does away with the hypertrophy of the opposite side that sometimes follows lobectomy, as it must be borne in mind that in paired organs removal of one causes the other at times to undergo hypertrophy. The estimation of basal metabolic rate and the adrenalin sensitization test are both of the utmost value when correctly done. The Mayos consider the estimation of basal metabolic rate as almost a specific indicator in hyperthyroidism when fevers, diseases of the pituitary and inanition are ruled out. It is unlikely that any unanimity of opinion will ever be reached concerning the correct anesthetic indicated in thyroid surgery. Ochsner, Eastman and Lahey use local anesthesia, the Mayos straight ether, while Crile uses gas-oxygen in conjunction with local anesthesia.

In gall-bladder surgery the techinque of exposure has come in for some attention. By the use of the incision spoken of earlier in this paper, the placing of a pillow under the right flank, the correct position of the operating table and the introduction of a gauze pack between liver and diaphragm as suggested by Masson, thus pushing the liver down, exposure is greatly facilitated and difficult operations upon the ducts and gall-bladder itself are rather easily done even in the usually fat type of patient. A number of surgeons have recently emphasized the importance of a working knowledge of the rather common anatomical anomalies that exist in the relations of the gall ducts and blood vessels. Babcock has called attention to the frequency of chronic cholecystitis complicating cardiac lesions, this being the cause of the frequent symptom of "indigestion" appearing in these patients. A rapid operation with gentle manipulation reveals the gall bladder or appendix at fault, and removal relieves the patient's pain, palpitation, flatulence or eructations. Babcock advises against elaborate operation with unnecessary exploration and finds the correctly done procedure is perfectly safe in this type of case. Smithies has called attention to the fact that out of 1000 examples of gall bladder disease 93 had pathological heart conditions. The present tendency is to favor removal of the gall bladder rather than simple drainage of that organ when diseased, as statistics from many sources continue to show secondary operations necessary in the drained cases. Ochsner, however, contests this view. He leaves the organ in, sewed to the peritoneum and fascia and packs its cavity with gauze. The latter point is important, as when he drained with the tube he found secondary operations frequently necessary. Roentgenologists, through improvements in technique, are becoming more able to give accurately a positive diagnosis of existing gall stones. Undoubtedly the greatest step forward in the study of gall bladder disease of modern times is the magnesium sulphate test first suggested by Meltzer of the Rockefeller Institute and whose practical details were worked out by Lyons of Jefferson University. In this test the injection of magnesium sulphate through an Einhorn tube into the duodenum causes a relaxation of the sphincter of Oddi with a subsequent flow of bile in three distinct parts —the first from the common duct of thin syrupy consistency, the second from the gall bladder of thick ropy consistency and of a dark color, and the third again of thin consistency and of light straw color from the liver itself. This test has been used innumerable times all over the country and has been found to be of great value especially in diagnosing cholecystitis and distinguishing between it and obstruction of the cystic duct. There have, however, been a number of reports from careful investigators who feel the procedure has been greatly overestimated and who even deny the ability of anyone to obtain the bile in normal cases in three distinct parts. The test may be done by anyone without special apparatus except the tube. The experience of the average clinic agrees with Crile, who found out of 33 diagnoses of cholecystitis by means of this test, 30 were confirmed by operation and out of 60 gall bladders ruled out

as normal by means of the test, only six mistakes were found at operation upon other abdominal organs subsequently. The error in diagnosis is about 10 percent. Incidentally the magnesium sulphate injection into the duodenum offers a most excellent treatment for catarrhal jaundice, according to its originator, Dr. Lyons.

Time does not allow a further account of additional important surgical advances. The magnificent progress made in chest surgery recently has not even been mentioned, nor has our gradually standardized method of nerve suture as developed by Dean Lewis. Practically everything we know of surgery of the heart is of post-war compilation as is also true of our newest methods of bone grafting. It is to be hoped that careful work and fruitful experience will teach us to be still more conservative in our daily operative work and will open further channels for the development of new ideas and progressive methods.

A CASE OF BEZOLD'S MASTOIDITIS PRECEDED BY THIRTY YEARS OF MIDDLE EAR SUPPURATION*

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On June 22, 1881, Friedrich Bezold (an otologist of Munich) in an address before a medical society in Germany, described what has come to be known as the Bezold type of mastoiditis. The following month this address appeared in print. From a perusal of it one gleans the salient fact that a suppurating mastoid may elect to give way at the tip and permit a flow of pus into the soft structures of the neck. That, then, is the Bezold type of mastoiditis.

I would like you to visualize with me the tip of the mastoid, perhaps more technically called the mastoid process. On the outer surface of the tip we find the bone rather thick and covered with the tendons of the sterno-mastoid, splenius capitis and trachelomastoid muscles. While pus can go through the bone of this external surface, yet it is very difficult, and even if accomplished its journey to the neck is practically stopped by these muscle insertions. Now let us look at the inner surface of the tip. Here it is different. Here we have bone that is smooth and not so thick. The digastric fossa or groove, sometimes called the incisura, occupies a large part of this surface. It is this groove that lends itself to the attachment of the posterior belly of the digastric muscle.

Let us now consider the mechanics of such a situation. Suppose we have pus coming through the bone of the inner side of the tip. It will tend to continue its journey—because that is the nature of pus. This particular journey is full of potential mischief. You see, the easiest way is down the neck internal to the three muscles attached to the external surface of the tip. It can go backward to the median line and it can go downward clear into the thoracic cavity.

Bezold states that the patient may recover after some months if the pus has been gotten rid of by deep incisions and drainage. In other cases there is a fatal outcome due to exhaustion, involvement of the spine, edema of the glottis or spread to the thoracic cavity. It is therefore seen that, while the Bezold type does not present the *cranial* dangers of other forms of mastoiditis, it is fraught with menace peculiar to itself. Fortunately this Bezold type is now rare. The reason for this you may have already conjectured; but I wish to emphasize this point after a description of the following case:

When patient O. B. was five years of age diphtheria visited the family. His three sisters were very ill with it and one of them died. He passed through the ordeal with what was probably a mild attack of diphtheria, nothing being noted but a "sore throat." About this same time, history has it, a discharge of pus appeared from the left ear. This discharge has kept coming and clearing up again through a span of thirty years—he being now 35.

About two years ago the patient contracted the flu. Otherwise he has weathered along very well, except for a trying time of a year on crutches following a leg fracture. He is a successful business man, and has borne his recurring ear discomfort with the same optimism which has carried him to a high place of regard in his own city and elsewhere.

Some years ago there was a mass removed from the left external canal. Probably it was a polypoid growth, resulting from the long years of intermittent streams of pus going by, leaving the trademark of its ugly touch by the way. At those times, when the pus came through the left drum and rolled out to the pinna, it did so without ear pain, although there was an occasional slight pain below the left mastoid. Thus, for thirty years.

On November 5, 1920, something more began to happen. Pain and swelling occurred in the neck and grew worse and there were fever, loss of appetite and pain in opening the jaws. On November 10, 1920, Dr. Cripe, his home physician, and Dr. Landis, a relative, brought patient O. B. to our Clinic. He was put through routine x-ray and laboratory examinations and tests. You will be interested in the local findings. There was pus on the floor of the canal of the left ear and a granulomatous, polypoid mass in the anterior superior portion of the canal. The drum was not reddened, neither was there bulging of the posterior wall. Whisper was heard at one foot with this left ear. Left

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side of neck was swollen. The greatest pain on pressure was two and one-half centimeters below tip of the mastoid; some pain on pressure over tip but none over antrum. That is, patient's main distress lay not in the ear and not in the mastoid, but in the soft structures of the neck.

I operated the next morning. The entire mastoid cavity was found packed with a mass of old, partially dried, cheesy, foul-smelling pus, with fresh fluid pus flowing into it from the antrum. No mastoid cells were left—simply a mass of pus from the outer to the inner shell of the mastoid bone. After this was cleaned out, an opening was found in the inner plate of the tip of the mastoid leading out into the soft tissues of the neck. A probe passed easily through this hole to two centimeters below tip. Incision and blunt dissection did not disclose any pus in the neck at that time; but later a large quantity of pus was obtained from the neck. A generous myringotomy was made in the left drum, through which came thick, creamy pus. The polypoid mass in the canal was curetted away.

It was about two months later that patient resumed charge of his business—feeling very well. But it was not until a month after that that the last tube was removed from the neck.

The tonsils, being diseased, were removed this summer.

There is still a little discharge from the external canal, and a slight amount from a small remaining opening in the mastoid, leading back to the antrum. One might feel tempted to do a radical mastoid, were it not that the patient's hearing in this affected ear is much better than it has been for years. In fact his hearing now is normal, that is, 20/20th whisper in each ear.

Frank H. Baker, pathologist for our Clinic at that time, found something out of the ordinary in the germ content of the mastoid cavity. He made elaborate tests in regard to the dominant organism. The gist of the matter was that he considered it a diphtheroid, although it was Gram negative and motile; whereas, according to Stitt, the diphtheria family, including pseudo-diphtheria commonly called diphtheroids, belong to the Gram positive non-motile variety. A culture of this organism was also sent to the Gradwohl laboratory in Chicago. The first report received from Dr. Gradwohl was that he found an irregular staining long bacillus and he was not sure of the family to which it belonged. But after the Gradwohl laboratory had made various tests, they also came to the conclusion that it belonged to the diphtheroid group. On the other hand, another good pathologist claimed that such things could not be. It would require more boldness and greater knowledge than I possess for me to enter this bacteriological discussion, but I very much hope that some bacteriologists present may take it up. Nevertheless, the central fact remains that there was a peculiarity about the morphology and actions of this organism, which my patient had harbored for thirty years, which marked it as something different from the rest of its kin. This brings up an interesting point which will be included in the summary of this paper.

Bezold has been quoted as saying that twenty per cent of all cases of mastoiditis are of this type. This was, of course, some years ago, Bezold having lived from 1842 to 1908. In some of the recent text-books it is mentioned as a rare or unusual condition. In trying to clear up the question of the actual latter-day percentage of occurrence, H. J. Councilor made a search for me in the Surgeon General's Library at Washington and wrote me, in part, as follows: "I have made a thorough examination of the literature indexed for the past twenty years in English, German, Italian, French and Spanish, dealing with mastoiditis, in an attempt to find something dealing with the relative frequency of the Bezold type. Although I found a number referring somewhat at length to the differential diagnosis, yet in no article were definite percentages mentioned." In reply to a letter of inquiry, Dr. Joseph Beck of Chicago stated: "I am pleased to report that in my experience of twenty-five years, during which time I examined and operated on more than three thousand mastoid cases, I have just had eleven Bezold's type." That, you see, would be less than four-tenths of one per cent. The reply received from Dr. H. P. Mosher of Boston said: "One per cent or even less." Dr. Charles W. Richardson of Washington wrote me as follows: "Bezold abscess in my hands has been about one-tenth of one per cent of mastoiditis. I consider it the rarest of conditions. I have always looked upon it as a type of perforation which took place in neglected and undiagnosticated abscess of the mastoid, particularly involving the lower cells and the tip. Bezold described these conditions some thirty years ago when the mastoid operation was done as a last resort, and therefore they were more frequently observed by him at that time than they are at the present time. With the early operation now there is no time for the development in the perforation of the tip in the digastric groove."

SUMMARY

1. It is interesting to note the long period of thirty years' infection in this patient; apparently starting from a mild attack of diphtheria.

2. Given a thirty years' local lodgment of diphtheria bacilli, let us speculate: Might these diphtheria organisms gradually change their characteristics (such as staining qualities, motile possibilities, etc.) just as a group of people isolated from outside influences might gradually

diverge from the original stock? The bacteriological findings are very interesting with this thought in mind.

3. Also, consider the minor role the pus-filled mastoid played in the local subjective symptoms of the patient.

4. The post-operative gain in weight (sixteen pounds more than at any prior time), with a splendid increased feeling of well-being, is probably an expression of systemic relief from a long harbored focal infection. The marked improvement in hearing is gratifying.

5. The now rare occurrence of the Bezold type (less than one-half of one per cent of all cases of mastoiditis, as compared to twenty per cent in Bezold's time) is largely due, as Dr. Richardson said, to the earlier surgical interference in mastoiditis by the modern otologist.

DISCUSSION

DR. E. J. LENT (South Bend): This type of descending abscess readily divides itself into three groups. This division is not arbitrary, but rather conforms to the anatomical configuration of the parts and to the insertion of the muscles at the tip of the mastoid.

In one group would be included those cases which perforate the tip in the region of the sterno-mastoid where the muscular tissue is dense; the course of this type of perforation is rather slow. The determination, if early drainage is instituted, is always recovery. There is one condition characteristic of this type of Bezold's perforation, and that is that the swelling is just at the tip of the mastoid. Another characteristic is that in very many cases you cannot palpate the tip of the process at all.

In the second group would occur those perforations where the pus drains into the tissue between the muscles, following the fascial apertures. This is the most fatal type of Bezold's mastoid. In this form of perforation the pus may burrow down as far as the clavicle, even to the roof of the pleura and as far back as the cervical vertebra.

The third group includes those cases where the abscess perforates into the muscular substance of the digastric. The course of this is slow and is very difficult at times of recognition. It is characterized by deep brawny swelling of the neck far forward, sometimes reaching the arch of the pharynx. Bezold records one case of perforation in the belly of the digastric, the abscess eventually draining into the pharynx. The patient recovered.

Fortunately these abscesses do not occur very often in infants or young children, due largely to the fact that the mastoid is not developed before the third year. However, children do have subperiosteal abscesses, which are higher up; the pus making its exit through the petro-squamosal suture.

As to the treatment of these cases, it is obvious that a radical exenteration of all mastoid cells should be made. The perforation in the tip should be located and enlarged, a guide passed down into the pus chamber and counter drainage established.

In a chronic case such as the doctor has here recited, permanent safety of the patient is enhanced by a radical procedure. The fact that the patient's ear had been draining for thirty years, no matter what the type of infection, would indicate a radical operation.

DR. HARRY BOYD-SNEE (South Bend): I have listened to Dr. Howard's paper with much interest, but I cannot accept it as covering the whole subject of the complication which is designated Bezold's type of mastoiditis. I must inject into this discussion consideration of the petrosa as a structure which can harbor the primary focus of infection in association with mastoid involvement; or it can exist quite disassociated from the mastoid structure. I have observed this complication in direct connection with the primary focus located in the petrous portion of the bone, and the connecting tract was found in an erosion in the wall of an infected terminal petrosal cell situated deep and beyond the mastoid; I have also noted it as a post operative complication in a case in which complete mastoid exenteration and complete tip and digastric plate resection had been done, and the direct connection was found in an erosion in the jugular plate of the petrosa. With this knowledge the operator who encounters Bezold's complication without any manifest defect in the digastric plate, will not hesitate to penetrate and explore the petrous portion.

DR. CARL MARION SAUTTER (New York City): Concerning the Bezold type of mastoid, I have had a few cases, and as I remember, most of them were due to a virulent type of infection. Two cases occurred where there was chronic suppuration and a radical mastoid was performed at once.

One case that I particularly remember that gave me considerable trouble, was the third type pneumococcus infection. That is an infection and organism that will cause more destruction and more breaking through of bone than any other type, and will do so very quickly sometimes. This infection was formerly known as the capsulatas streptococcus, but this is generally conceded now to be a misnomer.

Concerning diptheroid infection I cannot say much about that, but we do know that we get all kinds of infections in the mastoid. We even have the Vincent's spirillum, but these infections are more apt to be benign.

As one of the speakers has said, I believe it is quite true that the Bezold type is found less often than it was formerly, because of the early

diagnosis and the early operative interference in the mastoid.

DR. JOHN F. BARNHILL (Indianapolis): Bezold's type of mastoid abscess is, in my experience, not so frequently met with as reported by Bezold, nor so rare as quoted in the experience of Beck and Richardson. There can be little question but that the disease is less common now than twenty years ago when I saw and operated many cases. However, judging by the number I have seen and continue to see, I could not agree that the affection should be regarded a rare one.

While Bezold's abscess is always a late manifestation of mastoiditis, I have never known of a case occurring as late as thirty years. Indeed I have never witnessed its occurrence in a chronic case. It occurs usually from two weeks to two months after the onset of the mastoiditis, and depends largely upon the severity of the disease and the character of the mastoid cells. It happens only in cases where the cells are large at the mastoid tip and the bony cortex thin toward the diagastric fossa. When the cortex is thin above the attachment of muscles to the mastoid tip the perforation of bone takes place behind the ear and the pus travels upward, doubles the ear forward and produces the well known post-aural abscess. When the perforation is into the diagastric fossa the pus travels downward along the corotid sheath; there is hardening of the structures of the neck below the ear, the neck is stiff and painful to pressure, but the mastoid region itself usually remains normal in every way. Bezold's abscess is an example of surgical neglect. It would rarely occur if mastoiditis is early diagnosed and early operated.

DR. C. NORMAN HOWARD (closing): One would naturally think of the advisability of doing a radical mastoid. My reason for not doing it was that at the time it was an acute condition. I was anxious to do for this man the immediate necessary things, and if possible to get him through with no lessening of his hearing, or with perhaps an improvement. This we accomplished and his hearing is now perfect with that ear.

Of course we have not been idle from the medical standpoint; ringing the changes on various local antiseptics. His tonsils showed a possibility of making trouble, and we took them out. In other words, what I am trying to do with that man is to save his hearing, and if it comes to pass that other symptoms develop, we will probably have to do something further in order to save his life.

SHALL WE ADVERTISE?*

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In presenting a paper on this subject, I do so believing we can well afford to rest from the usual scientific papers read and discussed at these meetings, and consider some of the principles of the profession which are now being endangered, but which have prevailed since the introduction of medicine.

While this is not strictly a scientific subject, yet it is an allied one and one that should be close to the heart of every member of the medical profession. There are few problems confronting the profession today of more interest or possessed of more grave results, than the tendency to resort to or accept that most flagrant of all abuses "advertising". There exist in every community men whose intellects have not been quickened or their consciences impressed with the importance of ethics. On the contrary the commercial microbe has been sown and multiplied in the gray matter of their exaggerated ego until they are willing to commercialize their profession and trail under their dirty feet the principles on which the success of their profession has depended.

In talking to different members of this Society about a paper on this subject, I have had various suggestions offered. One says, "Make it raw"; another says, "They all advertise in some way; handle it judiciously". If "making it raw" means to use a hammer, or embarrass the guilty, if any there may be,—allow me to say that such is not my object; or if handling it judiciously means to handle it with gloves on and harmonize with or apologize for the guilty, I cannot be judicious to such a point. My object is to speak on this subject in a general way and consider its effects on the profession as a whole. I shall not regard the feelings of the little, selfish, narrow minded violator of our time-honored customs who tries to advertise himself and not methods, for by his conduct he has divorced himself from the profession and should have no consideration in the affairs of physicians; but what I wish to do is to send out the S. O. S. call to those of the profession who are inclined to sit by with a passive indifference and permit these irregular 2½ percent or near professionals to "rock the boat" of professional success.

From the beginning of medicine the profession has been controlled by a so-called code of ethics. One of the unwritten laws of that code is that physicians shall not advertise, and that no ethical physician would advertise in any way. In the rules governing the profession

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it has also been a written law that advertising was irregular and unprofessional. This applied to all of the allied branches of the profession, county, state, and national associations have legislated against it, and faculties in medical institutions have taught us a refrain from it. Boards of examination and registration have implied in our permits to practice medicine an agreement not to advertise. Physicians admitted under reciprocity are required to sign a contract not to advertise. Osteopaths, chiropractors and others applying for permission to practice are required to sign the same contract. The object has been to teach that the profession of medicine is a profession and not a business, and that any attempt to commercialize it was regarded unprofessional and a violation of the controlling code. We have built upon a foundation which has been strong,—strong enough to guide us in the confidence of the people at peace with one another, and respected by mankind in general; but indications now are that the foundations upon which we have built is tilting, and that the pendulum which marks the conditions that exist is swinging far from center. We are taking into our societies under the guise of full membership and good fellowship too many physicians who have no regard for ethics. They are too prone to ignore the admonitions of the past, and resort to the newspapers and other methods of getting their names before the people. Medical journals have printed articles expressing very liberal views on this subject, and we have accepted them with a passive indifference until at the present time advertising is accepted as almost legitimate.

When a young man begins casting about to decide on a business or profession to which he expects to dedicate his life's service, one of the first things he should consider is the rules and regulations governing that particular profession, and if he cannot enter that profession and conduct himself in harmony with the laws of the organization, he should not ask to be created one of them; and if created one and proves false to its requirements, he should not be continued as one. A member of any organization attempting in some irregular way to further his own position at the expense of others engaged in the same work, does that organization harm. No man should expect or demand the co-operation or protection of an organization when he is false to its laws, and betrays the association by violating the very principles on which the success of that organization has depended.

There was a time when the medical profession was held in reverence and respect. Physicians were regarded as men of intelligence, education and honesty of purpose; a profession of deeds and not of words. Then their virtues and capabilities were not displayed before the people in a spectacular way and service was rendered in a modest, dignified and honest manner. No confusion was created in the minds of the people as to what school they belonged to, who their friends were, nor what their specialty was. They were the medical advisors, and all were satisfied. But today the more confusion we can create, the more attention we can attract to ourselves, the more we can succeed in keeping our names before the public legitimately or otherwise, the more we expect in return.

We have fought members of other schools and advertised ourselves in various ways until the heretofore tranquil mind of the people has become disturbed. Doubting and suspicious, they are beginning to consider the profession a business or a trade, and that the same grasping, wrangling and deceptive methods are being resorted to as in other business avocations.

They realize that their health and body and confidence is being juggled with by the overzealous, designing and incompetent member of the profession who camouflages himself with the title of a physician and plays upon the minds of the unsuspecting public. What are its results? That we have progressed scientifically there can be no question. We know more about the human body and treatment of disease than formerly, but have we maintained our position in the respect of the public; has not our confusion and a tendency to display our self-estimated ability and importance served to confuse the people and drive them from the legitimate channel of medicine and cause them to seek relief from the near professionals? There is no place where it is so easy to impose upon the minds of the people as upon those who are sick and distressed. They are easily influenced and incapable of discriminating between the true and false, and when they see the testimonials of the christian scientist, the osteopath, the chiropractor, and your name, all appearing in the same paper with the same objects in view, what more can you expect than that the people who cannot make distinction would lose respect for one class, and form an attachment for another.

Their advertising looks as good to the people as yours, and while they may display more ignorance in their testimonials, the object of your egotistical and misleading personal reports is just as apparent and destructive to the code of ethics as theirs.

Mercantile advertising has always been accepted as legitimate. In that case they have something tangible to dispose of. A merchant may have a specially fine line of goods, or he may have shelf worn, second hand, or a smoke damaged stock, but he acquaints his patrons through the medium of the press with what he has. You can go examine his goods, take your choice and pay the price. But what have you to

advertise? Have you the audacity to advertise your ability as superior? It may be imaginary only. Have you second hand service to render? Or do you mean to say that you are a little smarter and more capable of doing all things than anyone else in your community? Professional advertising places you on a lower par than the merchant. He can display the goods he advertises, but you cannot. You can only display the man.

What is advertising? It is a method of bringing yourself or your product before the people for personal gain, in which you expect to dispose of something for which you get more in return than you give. It matters not whether you resort to the methods of the street corner vender, the local advertiser, or patent medicine man—you are all in the same class, a disgrace to the profession and false to the honors that have been conferred upon you. You are imposing upon the minds of an ignorant public under the protection of the medical association which fathers you, and the sooner we eliminate you from our societies, the better it will be for us.

If I were to ask you this question, "Shall we advertise?" I have no doubt what your answer would be. Not one of you would advocate going into the papers and conducting a paid advertisement along with the merchant or the patent medicine man, but do you advertise? There are many methods that can be resorted to. You can be spectacular in everything you do. You can attempt to play the churches, local clubs and societies. You may try to subsidize the telephone girls or report your day's business to the daily press, and put your name in a prominent position in connection with cases you come in contact with. You may report the number of cases that come to your office for treatment in a day's time or within the year; or you can secure the services of a staff correspondent and pay for an article in a monthly magazine. It matters not what your method, it's all advertising.

One man has said to me, "They all do it"; another said, "The higher-ups do it, why should not we?" I deny the charge. First, they do not all do it. There is still some honor in the medical profession. Second, the higher-ups do not advertise to the public. They may lecture at medical conventions, or send out printed articles to physicians only, and not the laity, on some particular subject that they are specializing in. This is in the line of education and is legitimate. If a physician has had the advantage of doing research work, or clinical advantages, and has developed a new line of surgical or medical treatment that has yielded more than ordinary results, it is his duty to make it known to the profession by reading a paper or demonstrating the results of his discovery to a recognized medical society. Every man should strive to give as much to the profession that he represents as he gets out of it. This is presenting methods, but not advertising the man. But the little fellow—the fellow who has no special ability, and nothing to offer—the one who has not the patience to sit down and render honest service in a professional way until he establishes himself among his brother practitioners as one who has ability, but resorts to irregular methods of getting his name before the people, is the one who does the harm. If a physician has special ability along certain lines, his brother practitioners are quick to recognize it, and, all things being equal, will call on him for help in time of need. In this way we pay you a compliment. We pay you a compliment in presenting you to our patrons as a man of judgment. This, with your best effort to do good service and an honest desire to render the best within you, should be your only advertisement.

But you say, "The higher-ups do it, and why should not we?" Is this true? I have tried to show the difference between a man parading himself before the public and a clinician imparting knowledge. The Mayo Clinic is perhaps one of the best known and most popular medical organizations in the country. They have been well advertised, it is true. I have heard them accused of doing it themselves. I do not believe it is so. We have done that for them. We have sent them our difficult cases who are examined by their able corps of physicians, a diagnosis made if possible, and treatment is instituted according to their plan; uninfluenced by the patient's grandmother or aunt, social or domestic handicaps such as we have to contend with at home. While we have as good physicians and surgeons all over the country as they are, yet they get results because of their methods and we have heralded their names broadcast until they have become household property and everybody knows the road to Rochester, but the medical profession has advertised them.

The daily press is supposed to be the moulder of public opinion. Newspapers are often hard pressed for news, and will publish any news items without considering the importance or effect. Especially is this true of the small local paper of the rural district. Any physician constantly reporting his cases to these papers with his name prominently mentioned in every instance, does it for personal gain of course, and he is a liability to the profession. These articles are not general news articles. They are of interest to three classes of people—first, the physician who writes them, or permits them to be written, because he likes to see his name in print; second, the unthinking class who marvel and wonder at the volume of business you would have them think you are doing; and third, the

thinking people who see the unfairness of your intentions and accept them only with disgust. But what is the effect in general of this kind of medical propaganda? If it is permitted to continue, the devil will be to pay.

One of the clearest articles on this subject appeared in the January number of THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. It is worth being reproduced and says: "A newspaper clipping bureau furnishes THE JOURNAL with clippings or abstracts of personal news and articles of a medical nature from practically every newspaper in Indiana. Very naturally we are amused and at times provoked to note the frequency with which some Indiana medical men, a few of them prominent and a limited number being officers of medical societies, permit their names to appear in the daily papers, often in repetition, concerning cases in which more or less so-called wonderful cures have been accomplished. In practically every instance the 'write up' gives indication of having either been written or inspired by the doctor whose name is mentioned. Lately THE JOURNAL office has been flooded with newspaper clippings, and even letters calling attention to the most flagrant abuse of ethics by certain members of our Association who seemingly court newspaper advertising and notoriety. It is conceivable that occasionally a doctor's name may appear in print in connection with a news note concerning some patient who has been given attention and the publicity occurs without the knowledge or consent of the doctor connected with the case, but such instances are rare, and such newspaper articles do not contain accounts of rare operations told in technical terms nor refer to wonderful or miraculous cures. Furthermore, the average newspaper does not publish these glowing tributes without knowing that they will acceptable. In fact newspapers are quite willing to conform to the wishes of the medical profession that advertising of such character be eliminated. The fact of the matter is that this unethical newspaper advertising and cheap notoriety, if not sought, is sanctioned by some Indiana doctors, and it is time that our local medical societies call for an accounting. We fully realize that the rules of medical ethics are broken often by many of our medical men, and when we attempt the 'cleaning up' process we ought to touch many subjects, but we might begin on newspaper advertising, which is the most flagrant abuse of all at the present time. We again suggest, as we have suggested once before, that county medical society secretaries keep a scrap book and paste in it all the newspaper clippings concerning members which appear to be an abuse of medical ethics and ask the offending members for an explanation. If any guilty doctor refuses to explain or to show that he has been the victim of the kind of publicity of which we complain, without his knowledge or consent, then it is time to ask for his resignation from any reputable medical society and list him among the quacks where he belongs."

I realize how difficult it is to control this destructive tendency and there is no better place to enter a protest against it than in the county medical society. If we are going to continue to exist as a profession, we must suppress those who are traitors to our cause; or if we are going to surrender our principles and deliver ourselves over to an organization of medical brokers, let us throw down the bars, remove all restrictions and admit all who come, regardless of their loyalty.

Let us play the game fairly.

CAUSE AND RELIEF OF ACUTE INTESTINAL OBSTRUCTIONS

Charles H. Mayo, Rochester, Minn. (*Journal A. M. A.*, July 15, 1922), states that the high mortality attending ileus is lowered by early diagnosis, judgment and prompt action when the condition is relievable. Obstruction is due to the various types of hernia. The intraabdominal ileus is due to bands, volvulus and openings in the mesentery or in the diaphragm, serious because of difficulties of diagnosis. Obstruction just below the duodenum causes alkalosis with tetany. Obstruction lower in the tract is manifested by vomiting of foul fluids. Prompt surgical relief of high obstruction is discussed. Colonic obstructions are most commonly due to malignancy, diverticulitis or volvulus. Time should not be lost in instituting efforts to make an exact diagnosis of cause, but surgical measures should be instituted at the earliest moment. The dangers of an unnecessary exploration are trivial compared with the grave risks of delay. Operation for relief of obstruction should be limited to a life-saving procedure, such as colostomy or enterostomy. The nature of the obstruction should be determined at operation, and future procedures should be based on the cause of obstruction. There is difficulty in differentiating diverticulitis from malignancy. Postoperative obstruction too often suffers from delay. The stomach tube is a valuable instrument in cases of obstruction. Early exploration should be made in postoperative obstruction to free adhesions. If exploration is delayed, ileostomy or jejunostomy is indicated. Local anesthesia or combined anesthesia is the method of choice.

THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION
Devoted to the Interests of the Medical Profession of Indiana
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EDITORIALS

THE JEKYLL-HYDE ATTITUDE OF THE PUBLIC PRESS CONCERNING MEDICAL PROGRESS AND PUBLIC HEALTH

In a recent number of the *Federation Bulletin* the Secretary of the Texas State Board of Medical Examiners presents a very interesting article, which we herewith reproduce in part, concerning the Jekyll-Hyde attitude of the public press concerning medical progress and public health. It is pointed out that while the press for the most part always has championed the cause of public health, and that it seldom has failed to give enthusiastic support to efforts to promote higher medical education and scientific research, yet there are many newspapers and periodicals, religious as well as secular, that have deliberately played into the hands of the quacks and charlatans and the unscrupulous politicians by accepting from ignorant medical vandals advertisements in which an attempt is made to discredit positive, scientific knowledge, the truth of which has been demonstrated thousands of times.

"If these editors or publishers do not believe that typhoid fever is distributed through the agency of the fly or through infected milk or water; if they do not believe that malaria is transmitted to man through the bite of a mosquito; if they do not believe that yellow fever is transmitted from one person to another by another species of the same pest; if they do not believe that bubonic plague is due to the bite of a flea which has fed on an infected rat or an infected person; if they do not believe that lockjaw and erysipelas are due to infectious organisms which gain entrance to the body with dust or dirt carried into a wound; if they do not believe that gonorrhea and syphilis are the result of direct or indirect contact with an infected person or through soiled linen, drinking cups or some receptacle or utensil used in common; if they do not believe that devastating epidemics of typhoid fever have resulted from sewage contamination of domestic water supplies, then they should have the courage to express their convictions and to insist that city, county, state and the national government shall abandon the existing very expensive but wholly unnecessary health departments, and thus save millions and millions of dollars to an already overburdened people.

"If, on the other hand, they do believe that these diseases are communicable and that as a result of failure on the part of ignorant, incompetent practitioners to so recognize them, or of indifference or inefficiency in the administration of health regulations thousands of lives have been needlessly sacrificed annually, then these newspaper editors and publishers are traitors—aye, Judases—to the communities which they serve, and which are supporting them, else they would not jeopardize the health or the lives of their patrons who always look to them for dependable direction in matters pertaining to the general welfare by publishing and spreading broadcast propaganda in which ignorant criminals (for most of the advertisers are practicing in violation of the criminal laws) set at naught the indisputable facts of medical science and assert that all diseases are due to subluxation of a spinal vertebra, to a distorted spinal foramen or to a pinched nerve, and that they may be easily and speedily cured by a simple thrust, a twist or a punch delivered on the spine of the sufferer by a miracle-working chiropractor or some other equally ignorant knave.

"There may be a few editors or publishers who are so densely ignorant—though none of them would admit it—that they do not know that the causative factor of malaria, the plasmodium, in the field of a microscope is as demonstrable as a fly on the back of an editor's hand; that with the aid of the lens the bacillus of typhoid is just as discernable as a boll-weevil is with the unaided eye; that the treponema of syphilis is as perceptible with the aid of a microscope as a flea on a dog's back; that the coffee-bean-shaped coccus of gonorrhœa is just as real as a chicken mite, or that the bacillus of tuberculosis is just as positive an entity as is that of its human host. But their ignorance of these demonstrable disease-producing organisms cannot negative the fact of their existence nor rob them of their dreadful potency.

"These editors and publishers may or may not know that the pathologies of such diseases as arthritis, rheumatism, pernicious anemia, leukemia, Addison's disease, Bright's disease, paralysis agitans, pellagra, diabetes, hypertension, cancer, and other chronic, incurable diseases, from the victims of which—through the publication of fraudulently intended misrepresentations concerning their causes and his ability to cure them—the medical impostor reaps a golden harvest, are just as positively demonstrable by a skilled pathologist as any other facts of science. But it is not the fault of scientific

medicine that neither the publisher nor his side partner, the medical mountebank, are not aware of this. They probably are equally ignorant of the physics of the gas engine, the steam locomotive, or the radio. But what would happen to them if they attempted to discredit the laws of physics?

"Frequently in the last three or four years the newspapers have made vigorous appeals for financial aid or for food or clothing for the starving Russians, the down-trodden Armenians, or for the French waifs who were orphaned and left unprovided for by the world war. They should know that there are thousands of men, women and children in their own country who are far more wretched than the Russians, the Armenians or the French waifs, since the latter could be made supremely happy by providing them with shelter, clothing, and a liberal supply of wholesome food, while the former—hopelessly incurable—must drag wearily, painfully on in the darkness of despond to the "Valley of Death", constantly scanning the horizon for the dawning of a new day—for a day which may bring them promise of relief from ceaseless torture. These are the pitiable, helpless creatures to whom the luring advertisements of human vultures offer a ray of hope—a phantom oasis in the desert of their wretchedness.

"It is possible that these publishers do not know what the fiendish impostors know only too well—that the victims of cancer, Bright's disease, tuberculosis, diabetes, pernicious anemia and other chronic, incurable diseases grasp at the promises made in such advertisements as a drowning person grasps at straws; and that in consciously aiding or abetting ignorant pretenders to take advantage of credulity in order to perpetrate such frauds they are equally guilty of dishonest action, and that they should be held criminally responsible for it notwithstanding the legality of their advertising practices?

"One might admire the daring of a bandit who goes out on the highway at midnight to pull off a hold-up, in the execution of which he must risk his liberty and possibly his life. Such a person is a prince in contrast with the unscrupulous medical vandal who would take the last farthing from the pocket of an unfortunate, credulous human on the promise of effecting the cure of an incurable malady; and we might respect the highwayman quite as much as we respect a publisher who, conscious of the misleading, fraudulent statements contained in a medical advertisement—but knowing that he is within the law in publishing it, accepts it as a source of revenue. We have little respect for a man, be he preacher, prophet or publisher, who accepts tribute and bread from an indulgent, confiding public with one hand while preparing a poison potion for it with the other. 'It is a mean dog that bites the hand which feeds it.'

"Contemplate the insolence of a medical impostor in taking a widow's mite for sitting at the bedside of a dying child, thrusting at its spine in a pretended effort to readjust a subluxated vertebra—which is an impossibility except in a fracture—while the little innocent is steadily cyanosing as the result of laryngeal diphtheria. An anxious mother—recently widowed by pneumonia via the chiropractic route—is standing by, alternately wringing her hands and wiping away her tears and, between the stridulous, rasping, respiratory efforts of her strangling infant, crying out piteously, 'Doctor (?), for God's sake, doctor; can't something be done to save my baby?' Antitoxin, which would have averted this painful scene, intubation and tracheotomy, either of which—as a last resort—might have saved the little darling, were meaningless terms to this benighted hypocrite, and, after a few more of his useless thrusts and a few more gasping efforts on the little sufferer to get oxygen into her lungs, the struggle ceased, the little eyelids closed and the idol of a mother's heart lay cold and still in death—a victim of commercial greed plus medical incompetency.

"To whom should this tragedy be charged? Should it be charged to the monster who ignorantly or, knowing that other and more effectual treatment than he could give was available, deliberately permitted a helpless infant to strangle to death or should it be charged to the publisher by whom, through a flaming advertisement in the Sunday-morning issue of his paper, the unsuspecting, simple-minded mother of this child was duped into placing her seriously-sick baby in incompetent hands? We leave it to you and to the conscience of the publisher to answer."

"UNDERWEIGHT" A DELUSION

Is there but one normal, healthy standard weight corresponding to every height, so that he who exceeds it is "overweight" and he who falls below it "underweight"? That this idea is a dangerous fallacy is contended by Charles K. Taylor, of the Carteret Academy at South Orange, N. J., writing in *The Outlook* (New York) on "The Great Underweight Delusion." According to Mr. Taylor, a "stocky" boy, or a slender one, may be just as normal and healthy as one who has the "standard" proportions of the Apollo Belvedere. They are of different types, that is all. Some people are doubtless too fat and others too thin, but that fact is to be ascertained, not solely by comparing weight with the height, but by a system of measurements taking both these figures into account.

Mr. Taylor has worked for years to construct a system of tables for this purpose, and thinks he has now a satisfactory method of applying his ideas in practice. He writes:

"Children are frequently slender because it happens to be a hereditary type just as it is hereditary for some to be stockier and heavier than the average. Some races are typically slender, with weight below the general average of humans.

"The very essence of our delusion is the claim that there is only one normal and healthy type of build—the 'average'—and if children (not to mention adults) happen to be more slender than this highly worshipful average, then, obviously, *obviously!* something is wrong with them. They are *underweight!* A frightful term that sends whole communities into providing fattening diets for perfectly healthy children and doing everything that uncanny genius will suggest to make a lot of normal children morbid over matters they do not need to worry about.

"It might be interesting for some one to analyze the Worship of the Average. I don't know what we would do without it! Why, our whole educational system is based upon it! The *average* child! And that is why, though the duller-than-average child is perhaps prodded up a little, children brighter than average are caught fast in the machine, so that educationally they are rarely able to come anywhere near their capacities.

"So when we insist that children should at least come up to an average in weight we are doing only what we also do in the classroom, with this difference, however: When a child's weight is over-average, then we are likely to smile with approval: but when a child is mentally over-average, well, we just let that child remain in the grip of the machine that keeps achievement down to the average scale of things.

"Our stand is simply this—that it is just as normal and healthy for some children to be more slender than the average and for others to be stocky or thickset, as for still others to approximate the average, that it is a matter of inherited type of build, and all we need to do is to see that a child is properly developed for his or her normal type of build.

"When a child is in good physical condition, and particularly when that child's muscles are not flabby, but firm and efficient, then we may be sure that the child's weight is correct, *no matter what it is.* And our work, then, is merely to see that a child has a physical development corresponding to his or her type of build.

"It will take a very serious mental upheaval to bring many of us to see that the question is health and development, and not one of weight, but we are coming to it little by little. And once this is accepted, then another question will come promptly into being. Here is this one: 'How are you going to know when a child is well developed?' Nor is this going to be difficult to answer."

Mr. Taylor's plan is to prepare, from an actual study of healthy children of various heights and weights, tables on what he calls "a height-weight basis." Instead of requiring one particular weight for a given height, these tables give bodily measurements corresponding with various weights, running from the slender type to the "stocky" and the "thick-set." By comparison with these it is easy to see whether the boy is normally developed for his particular height and weight. He adds:

"Our standpoint is based on an intensive study of some thousands of children over quite a number of years. If a child is healthy, and is not one of those typically 'fat' children, then the child's weight is correct, no matter what it is."—*The Literary Digest*, May 6.

PROSTITUTING THE CHURCH IN THE INTERESTS OF QUACKERY

A few weeks ago the chiropractors exploited their cult and inconsistent form of treatment, and it is said even the pulpit was utilized for the exhibition of "adjustments", in one of the Methodist churches at Elkhart. Following close upon the heels of this came blatant newspaper announcements by the chiropractors to the effect that a similar performance would be given in one of the Methodist churches in Fort Wayne. It so happens that a number of representative regular physicians are members of that church and they protested concerning the desecration of the church by any such proceeding, and a protest also was filed by several of the societies affiliated with the church, to say nothing of many protests from individual members. However, those responsible for the renting of the church had cast the die and they begged off on the spurious plea that a contract had been made and must be fulfilled. Accordingly the exploitation of the chiropractic cult in the First Methodist Church of Fort Wayne was carried through in full accordance with the announcements contained in the daily newspapers, and in direct opposition to the wishes of a very large representation of the membership of the church. The strange feature about the action is the fact that prior to this episode the church could not be obtained for any purpose not directly religious in character, even such an innocent entertainment as a concert providing an admission fee was charged, yet in the instance under discussion a rule of the church was broken and a good sized rental fee was accepted.

It is a well known fact that some of the worst frauds are covered by the cloak of religion and the sanctity of the church. Ministers as a class proverbially are known as supporters, usually innocently, of quackery, and oftentimes the rankest forms of commercial deception and fraud. The patent medicine evil in its palmiest days owed its success very largely to the endorsement of ministers and to the effect secured by advertising in religious papers. When practically all other newspapers and periodicals had barred from their pages patent medicine and quack doctor advertisements. the religious press still continued to carry such advertising with shameless disregard for decency or honesty.

A few months ago we published in THE

JOURNAL an editorial entitled "The Doctor's Relation to the Church", in which we pointed out that the principal reason why doctors do not identify themselves more often with churches is because they not only see so much hypocrisy, deception and dishonesty within the church walls, but no effort is made to correct the evils that exist. We are fully cognizant of the fact that hypocrites will get in the church in spite of all that is done to keep them out, and that oftentimes the church will be made a cloak for shady transactions, but this ought to be limited to the individual members of the church and not to the church as a whole. The church stands or should stand for the highest ideals of life, and should be unswerving in its devotion to moral principles. The only reason why a church ever deviates from the path of rectitude is because its leader either is not sincere and has a "screw loose" in his ethical make-up or he hasn't the moral backbone to stand up for what he knows to be right.

In the case under consideration the pastor of the First Methodist Church of Fort Wayne should have been true to his calling and to the Church he represents and said to the Board of Trustees or those responsible for renting the church for other than religious purposes, "Gentlemen, the church over which I preside is for religious purposes and must not be desecrated knowingly, or its motives questioned. No matter what it costs you in financial loss or embarrassment, the ideals of the Church must be preserved and the church not prostituted for commercial ends." Had he taken this stand and refused to have anything more to do with the church if it deviated from the path of rectitude he would have had the support of probably a majority of the membership of his church, and he would have had the satisfaction of living up to the high ideals of the Church.

Wholly aside from the question of the merits of chiropractic which is unscientific, inconsistent, and based upon the rankest ignorance of the cause and effect of disease to say nothing of being practiced for the most part by men and women with not even ordinary education, the attitude of the church should be one of indifference to it or the teachings and practices of any other medical sect. The Church, Methodist or any other, should stand for the highest ideals, and at all times for truth and honesty. Under no circumstances should it endorse openly or by inference *any* school of medicine, and opening the doors of the church to a pseudo-medical cult which represents a lack of education, training and experience for the care of human ills, and the practicing members of which, in the State of Indiana, are law breakers, is a blot upon the Church, to say nothing of being an insult to the members of the Church, especially the medical men who have a right to expect something better.

The First Methodist Church of Fort Wayne did itself irreparable damage and lowered itself in the estimation of many thinking people when it permitted the chiropractors to desecrate the church by a lecture extolling the virtues of chiropractic, and the whole proceeding, tinctured with commercialism from beginning to end, has been nauseating to many members of the Church as well as many on the outside. A great principle was at stake, and the Church sacrificed its honor and its standing rather than defend that principle. The Church needs the respect and confidence not only of its own members but those on the outside, and it loses all this when it stoops to such an incident as the one to which we refer.

UNETHICAL NEWSPAPER ADVERTISING

As the readers of THE JOURNAL know, we have had considerable to say editorially concerning the tendency of some doctors to seek newspaper notoriety by permitting their names to be published in connection with the medical or surgical treatment of cases. These editorial comments have been inspired by complaints from various portions of the State as to the unethical conduct of certain physicians who persist in using the newspapers to further their own ends. Within the last few months dozens of newspaper clippings have been received at the office of THE JOURNAL in which a certain doctor, president of his county medical society, has been exploited in connection with his medical or surgical attention to cases. Very naturally the local medical profession has not looked with favor upon such unethical conduct, and the editor of THE JOURNAL wrote the offending doctor a letter, suggesting that, as president of his county medical society, it was not only unethical but in rather bad taste to continue to exploit himself in the daily newspapers and by so doing put himself on a par with the advertising quack and charlatan. The aforesaid doctor wrote back with the specious argument that he was no worse than the Mayos and those connected with the Long Hospital at Indianapolis, both of whom were his worst competitors in securing "business", but that objection to his practice of giving items to the newspapers would meet with improvement on his part. It was pointed out to him that neither the Mayos nor those connected with the Long Hospital in Indianapolis would take the trouble to furnish items concerning themselves for publication in some distant paper and that, in all probability, they would make every endeavor to suppress such publicity. On the other hand it was pointed out that whenever the doctor's name

appears regularly in local newspapers in his vicinity it is a sure bet that he has been responsible for the information obtained by the newspapers and courts the publicity given. It also was pointed out that this sort of publicity could be checked and not only make a better impression upon medical confreres in the vicinity but upon the public as well. The correspondence evidently was not considered private, in proof of which a newspaper clipping concerning the matter is herewith reproduced from the *Elwood Call-Leader* of Thursday, June 1:

DR. BULSON BUTTS IN

Editor of Medical Journal Would Suppress Newspaper Items.

Dr. Albert E. Bulson, Jr., editor of the Journal of the Indiana State Medical Association, is desirous of having the physicians of the state keep from the newspapers any report of cases of illness and of operations performed wherein the name of the physician is mentioned, saying that it is "unethical."

It appears that there are some persons in Elwood who have possibly been envious at the mention of some of the physicians' names in the newspapers, appearing in the papers frequently, who have written Dr. Bulson saying that the code is being violated by this "advertising" and the doctor takes the matter up with the local physicians.

The physician who gives the newspaper reporter information that is of interest to the readers is entitled to have his name connected with the case or have it omitted as he sees fit. Unless the request is made not to use it the name will appear, and if it is classed as advertising all well and good. The order of things has changed with the passing of time and there are progressive physicians nowadays as well as fogies.

It is very evident, judging from what has transpired, that the doctor in question does court newspaper publicity and that he has no intention of mending his ways or courting the respect of his confreres. In his letter to the editor of THE JOURNAL he asks for a copy of our code of ethics, which he facetiously calls "the code of essecks", or a quotation of the section referring to publicity. We herewith comply with the request:

"Solicitation of patients by physicians as individuals, or collectively in groups by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. That does not prohibit ethical institutions from a legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other self-laudations defy the traditions and lower the tone of any profession, and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not per se improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulating such cards.

"It is unprofessional to promote radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of diseases; or to employ any methods to gain the attention of the public for the purpose of obtaining patients."

We have no desire to enter into local medical squabbles of any sort, but the Indiana State Medical Association stands for certain principles and a conduct on the part of its members which is above reasonable reproach. If the president of one of the component societies of the Indiana State Medical Association sees fit to break a leading rule of professional ethics and ordinary decency and then brazenly defies his confreres who attempt to influence him in reforming his ways for his own interest as well as for the interests of the profession, it is time for some action on the part of a medical society which will tend to purge itself of such conduct on the part of one of its members, and in this case, THE JOURNAL'S good intentions having been abused, there is ample reason for the stand herewith taken.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages: but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

THE typhoid season is here. How many doctors are remembering the value of typhoid vaccination and advocating it to those who are going to tour and camp in places where water and food supplies are liable to be contaminated?

PROHIBITION has done much to stimulate the consumption of confectionery and soft drinks. The desire for a stimulant to take the place of alcoholic beverages has been met by the manufacture of about fifty-seven varieties of soft drinks containing caffeine, and it is said that the sales of one well known stimulating soft drink have been almost quadrupled since the

Volstead Act became operative. That some of these caffeine-tinctured soft drinks are positively injurious as a result of the stimulating effect and habit formed for increasing amounts cannot be doubted. Perhaps in the end we will find even more stimulating soft drink addicts and deleterious effects therefrom than we ever had from alcoholic beverages.

RECENTLY there has been much agitation concerning the necessity of having sufficient vitamins in our diet, and certain manufacturers—taking advantage of this fact—have been advertising extensively the vitamin value of certain manufactured products sold at enormous profit. It would be well for physicians to tell their patients that it is unnecessary to buy these proprietary preparations in order to secure an adequate amount of vitamins for the diet. Nutritional studies indicate that fruits and vegetables contain a sufficient amount of vitamins, and too much stress cannot be laid on the importance of taking a generous amount of fruits and vegetables, and this is necessary to offset the acid character of minerals found in meat, cereals and eggs.

THE President of our State Medical Association was a little slow in making his committee appointments, and we are under the impression that he procrastinated because he thought that most of the committees do not functionate anyway and that a late appointment is just as good as an early one. In this he is quite right. In fact we are in favor of abolishing all committees except those that show some signs of life. It is the height of absurdity to appoint three or five doctors on a committee, and at the eleventh hour have a committee report based on no actual work of the committee, prepared hurriedly by the chairman, and presented at the annual session of the Association. The fewer and the smaller the committees the better, but let us do away with committees that do not functionate.

ONE of the unfortunate situations produced by the present numerous perplexing medical laws is that of the inability of some of the ablest men in the profession to secure legalization in states which made graduation from a Class A medical college, A. M. A. rating, the statutory qualification for license—either by examination or through reciprocity. This requirement defeats the purpose for which reciprocity was intended and for which this Federation was said to have been organized, and it has built a stone wall around good men of all schools of practice, many of whom are superior in mentality and in medical ability to the men who proposed the laws which limited their sphere of usefulness. I know of no good reason why educated, ethical physicians who graduated from the best colleges we had twenty-five years ago and who have since been in continuous reputable practice should be barred from the privilege of the license in any state of the Union.—T. J. Crowe, Dallas, Texas, *Federation Bulletin,* June, 1922.

IN a recent paper, "Postoperative Pulmonary Complications", published in *Current Researches in Anesthesia and Analgesia* for March, 1922, Dr. Alma Vedin, anesthetist to the New York Hospital, gives some pertinent recommendations for careful examination before and intelligent care after operations. The author states that in an analysis of 7900 operations there were 120 postoperative complications or 1.51 per cent. The complications consisted of lobar and broncho-pneumonia, acute bronchitis, pleurisy (acute fibrinous, sero-fibrinous and suppurative), and embolism of the pulmonary artery, the exact figures being 63 lobar pneumonia, 20 bronchial, 14 acute bronchitis, 11 pleurisy and 12 of embolism of the pulmonary artery. There were 29 deaths; of the 12 cases of embolism, 10 died. An analysis of these complications following abdominal operations shows that there is a large percentage following upper abdominal as compared with those in the lower abdominal regions. The greater number of complications appeared within 2 days following operation.

VACATIONS are popular with all classes of people. Probably the doctor is the least inclined to take a vacation because he thinks he cannot find an opportunity to get away from his work. However, if he waits for the time when he does not have responsibilities he never will get away. On the other hand, he owes it to himself and to those whom he serves to be refreshed in mind and body, and this can be brought about only through the relaxation and the change resulting from an entire divorce from every-day work. This does not mean that the doctor gets a vacation when he leaves his office for a few hours or a day or two to fish in some nearby lake where he is in constant touch with his home work, but it does mean that he must get far away from his home, with complete change of climate and surroundings, and divorce himself entirely from his work. Two to six weeks in the mountains or at the seashore, or a long automobile trip taken leisurely usually affords the beneficial results that bring about a physical and mental rejuvenation that finds its response in more and better work for the ensuing months.

THE Division of Venereal Diseases of the United States Public Health Service has arranged with several prominent syphilographers and genito-urinary surgeons whereby the advice

and counsel of these authorities is to be made available to general practitioners. The plan is referred to as "Consultation by Correspondence".

The method of utilizing this service is for private practitioners who have under their care any cases of venereal infection which they wish to describe to a specialist and ask for advice in regard to treatment or to the method of procedure in handling the case, to send to the State Board of Health a letter setting forth all of the data which they wish brought to the attention of the proper specialists. These letters will be forwarded to the Public Health Service, who in turn will secure an answer to the communication from the best known specialist on the particular phase of the subject discussed in the communication from the private practitioner. It is believed that this sort of correspondence between private physicians and well known specialists will be of material benefit in many cases. This service is, of course, entirely free of charge.

ALL students at the University of Arizona at Tucson sleep in the open air on sleeping porches. This is obligatory for all those who live on the college grounds, and it has been found advantageous from all points of view, we are told by A. O. Neal, Registrar of the University, in an article contributed to *The Nation's Health*. This Arizona University, Mr. Neal tells us, is unique in many ways. In percentage of growth in the past six years it has exceeded all institutions of higher education except four. The housing of the increasing number of students is a vital problem, and its solution has been the plan in which all students sleep on open-air porches. The experience of twenty years has led the University authorities to believe that it is satisfactory from every point of view. It affords rest and sleep in the open, the benefits of which are shown in the vitality and work of the students. It is not unusual for students to make extraordinary gains in weight and endurance in remarkably short time. Few students are willing to return to indoor sleeping rooms after having had a semester's experience sleeping in the open air. Open air sleeping is adaptable to localities where the climate is not so favorable as in Arizona, and there are many colleges and institutions of learning that could adopt to advantage the open-air sleeping. —Abs. from *Literary Digest*, May 6.

IN a paper read before the Chicago Branch of the American Pharmaceutical Association in January of this year, Dr. A. S. Burdick, of Chicago, gives a review of the manufacture of synthetic medicinal chemicals in America. He calls attention to the fact that before the late war, in spite of the fact that the United States had almost illimitable sources to draw on for raw materials through its coal mines, coke ovens and gas plants, its manufacture of medicinal synthetics was virtually limited to the salicylates, including salicylic acid and its salts, acetylsalicylic acid and salol, and small quantities of saccharan, phenolphthalein, and argyrol, and most of these were made by German-owned corporations. Under the stress of necessity, and responding to the call of the government, a number of American manufacturers undertook the production of the most important synthetic medicinals. The number of those which might really be called indispensable was not as large as might be expected—perhaps there were a dozen all told—and of these all are now being made in the United States. He closes his paper with the following appeal which should receive a response from every physician in the United States. "The achievements of the last few years, of which we are all justly proud, are due largely to the fact that we were forced to cut loose from the apron strings of German science. We found we could walk alone, and some of us now think we might 'grow up'; but there are people in the United States who still believe that only the Germans know how to make dyes and drugs, and that we should return humbly to our former condition of scientific dependence. Such a surrender then—for surrender it will be—means setting back the hands of the clock so far as the progress of American medicine goes. It means that we shall be unable to contribute our proper share to the scientific work of the world during the next generation. It means that medicine will not develop in this country as it will elsewhere in the world, where chemical sciences are recognized as being fundamental to a knowledge of the human body in health and disease and to the maintenance of the public welfare. I appeal to you whose interests are closely allied with those of the chemical manufacturer, for support at this critical time which means so much to the future of this, our common country."

DEATHS

MALINDA M. WHEELER, M.D., died at her home in Noblesville, May 25. She was a graduate of the Beach Medical Institute, Indianapolis, in 1885.

E. L. BROWN, M.D., died at his home in Thorntown, May 15, at the age of seventy-six years. Dr. Brown graduated from the Eclectic Medical College of Cincinnati, in 1879.

CHARLES M. SMETHERS, M.D., of Spiceland, died at his home, May 30, following a long illness. Dr. Smethers was fifty-two years of age. He graduated from the Illinois Medical College, Chicago, in 1903.

MARTIN V. B. NEWCOMER, M.D., of Tipton, died June 13, at the age of eighty-six years. He was graduated from the Medical College of Ohio, Cincinnati, in 1867. Dr. Newcomer was a member of the Tipton County Medical Society, the Indiana State Medical Association and the American Medical Association.

SAMUEL D. HATFIELD, M.D., died June 2, as the result of an accidental gun shot. Dr. Hatfield was forty-one years of age. He graduated from the Louisville Medical College in 1906. Dr. Hatfield was a member of the Howard County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers, for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

THE Wells County Medical Society met at Bluffton, June 6.

DR. W. B. HURON has been made county health officer for Tipton County.

DR. W. F. CLIPPINGER has been reappointed county physician for Vanderburgh County for another year.

DR. P. C. BERNS, of Linton, has completed a post-graduate course in medicine in Philadelphia.

THE Adams County Medical Society held a meeting at Berne, June 9, in the office of Dr. A. Reusser.

JAMES W. ALDRIDGE, M.D., of Covington was married June 15 to Miss Martha Coffing of the same city.

DR. WALTER MCBETH has moved from Burnettsville to Royal Centre where he will practice medicine.

PROFESSOR HOWARD BISHOP LEWIS has been appointed to the chair of physiology at the University of Michigan.

THE Huntington County Medical Society met June 6, at Huntington. A paper was presented by Dr. E. T. Dippell.

FOUR nurses were graduated from Neuronhurst, Dr. W. B. Fletcher's Sanatorium, Indianapolis, Thursday, June 15.

THE Methodist Hospital of Indianapolis has installed a new $7,000 x-ray machine which carries 285,000 volts of electricity.

DR. LEWIS C. TAYLOR, Springfield, has resigned his position as executive secretary of the state board of medical examiners.

DR. F. H. RILEY of Jamestown has received a federal appointment at the Jewish Hospital at Cincinnati, assuming duties on June 15.

DR. HILDING BERGLUND, of Boston, has been awarded the John White Browne scholarship for research at the Harvard Medical School.

DR. ETHEL M. WATTERS, of San Francisco, has been appointed consultant in the administration of the Sheppard-Towner Maternity Act.

THE Tenth District Medical Society held a meeting June 8, at Valparaiso. A paper was presented by Dr. James H. Stygal, of Indianapolis.

DR. GEORGE F. BEASLEY of Lafayette was injured seriously on June 21 when he fell from a step-ladder to the ground. He is eighty years of age.

THE Henry County Medical Society held its monthly meeting June 13, at Newcastle. A paper was presented by Dr. Bernard Erdman, of Indianapolis.

THE Fountain-Warren Medical Society held its regular meeting at Veedersburg, Thursday, May 30. Dr. F. C. Walker, of Indianapolis, presented a paper.

DR. DEAN METCALF of Fort Wayne is spending six weeks in the East, taking the post-graduate course given annually by the Trudeau School of Tuberculosis.

THE second annual commencement exercises of the St. Joseph's Hospital School for Nurses, Fort Wayne, was held on May 18. Seven nurses received their diplomas.

THE Clark Memorial Hospital, at Jeffersonville, Indiana, was dedicated June 15. The hospital has been provided as a memorial of the county's dead in the world war.

DR. ESPY K. SCHURTZ, of Waterloo, Indiana, is attending a course of instruction on tuberculosis at Saranac Lake. He will be absent from his practice for six weeks.

THE Kosciusko County Medical Society held a meeting at Warsaw, May 30. Dr. H. A. Shaffer, of Rochester, presented a paper on "Medical and Surgical Border Lines."

THE Delaware-Blackford County Medical Society held a meeting at Muncie, June 2. A paper on "Evaluation of Symptoms in Diagnosis" was presented by Dr. O. E. Stern, of Indianapolis.

DR. ROSCOE HYDE, of Hartford City, and Miss Elizabeth Weghorst, of Indianapolis, were married Thursday, June 8. They will make their home on West Washington street, Hartford City.

DR. JAMES M. DINNEN of Fort Wayne has been appointed chief surgeon of the Lake Erie & Western Railroad, with general direction of the medical and sanitary work of the entire road.

DR. M. F. JOHNSON, of Richmond, has been elected president of the Sixth District Medical Society. Dr. R. D. Morrow, of Connersville, was made secretary-treasurer and Dr. Smith, of Newcastle, councilor.

THE Madison County Medical Society held its annual outing at Idlewold Park, near Pendleton, June 20. Dr. John Oliver of Indianapolis presented a paper, the subject of which was "Tuberculosis of the Spine."

DR. O. M. DEARDORFF, formerly of Hagerstown, recently has completed a post-graduate course in surgery at the Chicago Post-Graduate School, and located at Muncie, 243-5 Johnson Block, for the practice of medicine and surgery.

ANNOUNCEMENT is made of an Anesthetists' Congress to be held in Columbus, Ohio, October 30 and 31 and November 1, 1922. The Congress is to be international in character, and promises to be the biggest gathering of its kind ever held.

THE Benton County Medical Society held its regular June meeting at Boswell. Drs. F. S. Crockett and Romberger of Lafayette presented papers. Following the scientific meeting an informal reception was held at the home of Dr. and Mrs. O. M. Flack.

DR. F. M. STACKHOUSE of Kingman has retired from the active practice of medicine on account of disabilities received in an accident a year ago. He has purchased a small newspaper at Plymouth, Ohio, and has taken up the work of editor and publisher.

THE Sixth District Medical Society held its annual convention in Connersville, June 1. Papers were presented by Dr. Schonwald of College Corner; Dr. Smith of Newcastle; Dr. J. F. Bowen of Occident; Dr. Craft of Indianapolis and Dr. Segar of Indianapolis.

DR. ERIC CRULL of the Irene Byron Tuberculosis Hospital, Fort Wayne, and Dr. James Stygall of Indianapolis, medical director of the Indiana Tuberculosis League, motored to Saranac Lake, New York, the first of June to take the six weeks' postgraduate course in tuberculosis.

DR. MORSE HARROD of Fort Wayne was elected president of the National Eclectic Medical Association at their recent meeting held in Indianapolis. Dr. J. E. Holman of Indianapolis was chosen first vice-president and Dr. W. P. Best of Indianapolis, recording secretary.

THE Elkhart County Medical Society held its annual outing at South Shore Inn, Lake Wawasee, June 8. About 125 members and guests were present. The afternoon was spent in games, and dinner was served at six o'clock. Colonel Seth Bullock of South Bend was the speaker of the evening.

THE Muncie Academy of Medicine held a meeting at the Hotel Roberts, Muncie, June 9. Dr. Etta Charles, of Anderson, read a paper on "Gasoxygen Anesthesia", and Dr. Clay Ball, of Muncie, presented a paper on "Ether Anesthesia." A paper on "Local Anesthesia" was presented by Dr. W. C. Moore, of Muncie.

THE second meeting of the Medical Women's International Association will be held at Geneva, Switzerland, September 4 to 17, 1922. Each society of medical women in the world is invited to send one eligible delegate and an additional delegate for every hundred members. Clinics in the different European countries may be visited en route.

THE new Harvard School of Public Health, which will open in September, is offering several fellowships of $1.200 each, for the year 1922-23. Special consideration will be given students working for their doctor's degree. Applications for these fellowships should be made to the secretary, School of Public Health, 240 Longwood Avenue, Boston, not later than August 1.

THE Third International Congress of the History of Medicine will be held in London, July 17 to 22, with Dr. Charles Singer as president. Anyone desiring information concerning the congress should communicate with Dr. J. D. Rolleston, 21 Alexandria Mansions, King's Road, London, S. W. 3. The official delegate from the United States is Lieutenant Colonel Fielding H. Garrison.

DR. HENRY LOWNDES LYNAH, of New York City, died March 31, 1922. Dr. Lynah was well known in the practice of the specialty of bronchoscopy and esophagoscopy. Dr. Lynah was one of the founders of the American Bronchoscopic Society. He was instructor in laryngology and intubation at the University of Bellevue Hospital Medical College and was professor of bronchoscopy and esophagoscopy in the New York Polyclinic.

AT a meeting held June 7 at the Bliss Hotel, Bluffton, the Anti-Tuberculosis Society of Wells County was reorganized. Dr. Eric Crull, of the Irene Byron Tuberculosis Hospital, Fort Wayne, and Mr. Cosper, publicity man for the state organization, were the speakers. Howard Uhlman, Bluffton, was elected president; Mrs. J. F. Decker, vice-president; and Howard Thomas, secretary. They plan to employ an executive secretary for the county work, with a central office in Bluffton.

SIR ALFRED PEARCE GOULD, surgeon, died suddenly in London, April 19. He was dean of the faculty of medicine of the University of London and was lecturer on anatomy at the Westminster Hospital, posts which he resigned on his election as assistant surgeon to the Middlesex Hospital. Dr. Gould was president of the Royal Society of Medicine and of the Roentgen Society. During the war he was active in his post as Officer-in-Charge of the Surgical Division of the Third London General Hospital at Wandsworth. He published the Elements of Surgical Diagnosis and was joint editor of the International Textbook of Surgery.

DR. ALFRED G. LONG, of Cambridge, Mass., has arrived in Indianapolis to become director of the division of bacteriology and pathology of the State Department of Health. He succeeds Dr. William Shimer, who has resigned to become head of bacteriological work at St. Vincent's Hospital.

As an indication that occupational strain is greater in the practice of medicine than in any other occupation, statistics for 1921 show that physicians head the list of suicides. During 1921 86 doctors, 57 judges, 37 bank presidents, 21 clergymen, 10 editors, 7 mayors and 7 members of legislatures took their own lives.

ANNOUNCEMENT has been made of the scope of the new school of public health which will be opened at Harvard University in September. Systematic instruction will be given leading to the degrees of bachelor of public health, master of public health and doctor of public health, while students in the school will be eligible under certain conditions to be candidates for the degree of doctor of philosophy in hygiene or of doctor of medical sciences. The new school will include departments of industrial hygiene and tropical medicine which have hitherto been a part of the Harvard Medical School. Dr. David L. Edsall will serve as dean of both the school of public health and the medical school.

DURING June the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Borcherdt Malt Extract Co.:
- Borcherdt's Malt Cod Liver Oil and Phosphorus.

Intra Products Co..
- Ven Sterile Solution Procaine 0.5 Per Cent.
- Ven Sterile Solution Procaine 2.0 Per Cent.
- Ven Sterile Solution Procaine 5.0 Per Cent.

Lederle Antitoxin Laboratories:
- Pituitary Extract-Lederle (Obstetrical).

Pituitary Extract-Lederle (Surgical).

Parke, Davis and Co.:
- Diphtheria Antitoxin piston syringe containers.
- Antitetanic Serum piston syringe containers.
- Antigonococcic Serum 12 Cc. bulbs.
- Antistreptococcic Serum 20 Cc. piston syringe container.
- Antistreptococcic Serum 50 Cc. piston syringe container.
- Anti-Anthrax Serum.
- Antimeningococcic Serum.
- Diphtheria Toxin-Antitoxin Mixture.
- Tuberculin B. F. (Bovine).
- Gonococcus Vaccine 1 Cc. bulbs.
- Gonococcus Vaccine 1 Cc. syringe.
- Gonococcus Vaccine 5 Cc. bulb.
- Gonococcus Vaccine 20 Cc. bulb.
- Erysipelas and Prodigiosus Toxins (Coley) 1 Cc. bulb.
- Erysipelas and Prodigiosus Toxins (Coley) 15 Cc. bulb.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District—Councilor	No. of Counties	1921 Memberships	1922 Memberships to date	Percentage
1st—Dr. Willis	7	176	174	.99
2nd—Dr. Schmadel	7	149	142	.95
3rd—Dr. Leach	9	130	116	.89
4th—Dr. Osterman	10	138	136	.98
5th—Dr. Weinstein	5	158	156	.98
6th—Dr. Spilman	8	150	160	1.07
7th—Dr. Earp	4	425	442	1.04
8th—Dr. Conrad	5	172	158	.92
9th—Dr. Moffitt	10	253	247	.97
10th—Dr. Shanklin	5	151	138	.91
11th—Dr. Black	6	191	191	1.00
12th—Dr. Morgan	8	241	240	.99
13th—Dr. Berteling	8	274	254	.92
	92	2608	2554	

KNOX COUNTY

The Knox County Medical Society held its June meeting at the Y. M. C. A., Vincenes, June 13, and had as its guest Dr. William Engelbach of St. Louis who gave a lantern slide demonstration on the "Diagnosis of the Ductless Gland Disorders." Seventy-five physicians from the surrounding counties of Davies, Gibson, Sullivan, and Lawrence and Wabash, Illinois, beside several from Evansville, were present. Dinner was served by the Ladies' Auxilliary of the Y.

D. H. RICHARDS, Secy.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

POLLEN DIAGNOSTICS-LEDERLE.—Liquids obtained by extracting the dried pollen of plants with a liquid consisting of 67 percent glycerin and 33 percent saturated solution of sodium chlorid. Polen diagnostics-Lederle are marketed in capillary tubes containing 0.01 Cc. of a liquid, representing 100 pollen units. Pollen diagnostics-Lederle are employed in the diagnosis of hay-fever (Pollenosis). (See New and Nonofficial Remedies, 1922, p. 232). The following preparations have been accepted:

Arizona Ash Diagnostic-Lederle: Prepared from the pollen of Arizona ash (*Fraxinus toumeyi*).

Arizona Walnut Diagnostic-Lederle: Prepared from the pollen of Arizona walnut (*Juglans major*).

Black Walnut Diagnostic-Lederle: Prepared from the pollen of black walnut (*Juglans nigra*).

Careless Weed Diagnostic-Lederle: Prepared from the pollen of careless weed (*Amaranthus palmeri*).

Cottonwood Diagnostic-Lederle: Prepared from the pollen of cottonwood (*Populus macdougali*).

June Grass Diagnostic-Lederle: Prepared from the pollen of June grass (*Poa pratensis*).

Ragweed Diagnostic-Lederle: Prepared from the pollen of ragweed (*Ambrosia elatior*).

Red Top Diagnostic-Lederle: Prepared from the pollen of red top (*Agrostis palustris*).

Sage Brush Diagnostic-Lederle: Prepared from the pollen of sage brush (*Artemisia tridentata*).

Shad Scale Diagnostic-Lederle: Prepared from the pollen of shad scale (*Atriplex canescens*).

Sheep Sorel Diagnostic-Lederle: Prepared from the pollen of sheep sorel (*Rumex acetosella*).

Slender Ragweed Diagnostic-Lederle: Prepared from the pollen of slender ragweed (*Franseria tenuifolia*).

Sweet Vernal Grass Diagnostic-Lederle: Prepared from the pollen of sweet vernal grass (*Anthoxanthum odoratum*).

Timothy Diagnostic-Lederle: Prepared from the pollen of timothy (*Phleum pratense*).

Lederle Antitoxin Laboratories, New York.—(*Jour. A. M. A.*, June 10, 1922, p. 1803).

NEUTRAL ACRIFLAVINE-HEYL.—The base of 3:6 diamino-10 methylchloracridine, containing about 1.5 percent of sodium chloride as a stabilizer. The actions, uses and dosage of neutral acriflavine-Heyl are essentially the same as those of acriflavine (see Acriflavine and Proflavine, New and Nonofficial Remedies, 1922, p. 25). Neutral Acriflavine-Heyl is also supplied in the following forms:

Neutral Acriflavine-Heyl Tablets 0.1 Gm.,

Neutral Acriflavine-Heyl Throat Tablets,

Neutral Acriflavine-Heyl "Pro Injections" 0.5 Gm. vials,

Neutral Acriflavine-Heyl "Pro Injections" 1.0 Gm. vials.

National Aniline and Chemical Co., New York.—(*Jour. A. M. A.*, June 17, 1922, p. 1893).

LUMINAL TABLETS ¼ GRAIN.—Each tablet contains luminal, ¼ grain. For a discussion of the actions, uses and dosage of luminal, see New and Nonofficial Remedies, 1922, p. 60.

VEN STERILE SOLUTION PROCAIN 0.5 PERCENT.—Each ampule contains 1 Cc. of a 0.5 percent solution of procain-N. N. R. (New and Nonofficial Remedies, 1922, p. 35). Intra Products Co., Denver.

VEN STERILE SOLUTION PROCAIN 2 PERCENT.—Each ampule contains 2 Cc. of a 2 percent solution of procain-N. N. R. (New and Nonofficial Remedies, 1922, p. 35). Intra Products Co., Denver.

VEN STERILE SOLUTION PROCAIN 2 PERCENT.—Each ampule contains 5 Cc. of a 5 percent solution of procain-N. N. R. (New and Nonofficial Remedies, 1922, p. 35). Intra Products Co., Denver.—(*Jour. A. M. A.*, June 17, 1922, p. 1893).

DIPHTHERIA ANTITOXIN (CONCENTRATED ANTIDIPHTHERIC SERUM GLOBULIN)-P. D. & Co.—Marketed in piston syringe containers, containing, respectively, 1,000, 3,000, 5,000, 10,000 and 20,000 units. Parke, Davis & Co., Detroit.

ANTITETANIC SERUM (SEE NEW AND NONOFFICIAL REMEDIES, 1922, P. 282).—Also marketed in piston syringe containers, containing, respectively, 3,000, 5,000, and 10,000 units. Parke, Davis & Co., Detroit.

ANTIGONOCOCCIC SERUM (SEE NEW AND NONOFFICIAL REMEDIES, 1922, P. 285). Also marketed in bulbs, containing 12 Cc. Parke, Davis & Co., Detroit.

ANTISTREPTOCOCCIC SERUM-P. D. & Co. (SEE NEW AND NONOFFICIAL REMEDIES, 1922, P 289).—Also marketed in piston syringe containers, containing, respectively, 20 Cc. and 50 Cc. Parke, Davis & Co., Detroit.—(*Jour. A. M. A.*, June 17, 1922, p. 1893).

PROPAGANDA FOR REFORM

EVANS' CANCER CURE.—Dr. R. D. Evans of Brandon, Manitoba, sells a "positive cure for cancer". The price is "one hundred dollars in advance"! The victim who parts with $100.00 for this cruel and worthless fake is told to shave a patch about the size of a silver dollar on the crown of the head. The "cure" is applied to this spot. This is for the treatment of internal cancer. "For 'external cancer' the discovery is applied on the spot." From an analysis made in the A. M. A. Chemical Laboratory, it was evident that Evans' Cancer Cure is essentially a mixture of 1 part of a fatty substance (such as lard) and 5 parts of dried ferrous sulphate.—(*Jour. A. M. A.*, June 3, 1922, p. 1739).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act:

Beil's New Nerve Tablets (Beil Mfg. Co), consisting essentially of aloin, zinc phosphid, nux vomica extractives, resin, a laxative plant drug, magnesium and iron salts.

Diemer's Prescription for Gonorrhea and Gleet

(Dr. F. W. Diemer Medicine Co.), consisting of pills which contain Epsom salt, calcium sulphid, ferrous sulphate and oil of cubebs, and tablets for external use, containing boric acid, zinc sulphate and hydrastin.

Diemer's Dyspepsia Tablets (Dr. F. W. Diemer Medicine Co.), consisting chiefly of baking soda, a laxative drug and ipecac alkaloids.

Diemer's Hot Toddy (Dr. F. W. Diemer Medicine Co.), tablets containing milk sugar, baking soda, a laxative plant drug and small amounts of ginger and red pepper.

Diemer's Kidney and Bladder Tablets (Dr. F. W. Diemer Medicine Co.), consisting chiefly of baking soda, saltpeter and a laxative plant drug.

Diemer's Treatment for Piles (Dr. F. W. Diemer Medicine Co.), suppositories containing cacao butter, borax, alum and tannin-bearing plant material.

Diemer's Antiseptic Female Suppositories (Dr. F. W. Diemer Medicine Co.), suppositories containing borax, alum and tannin-bearing plant material.

Diemer's Rheumatic Remedy (Dr. F. W. Diemer Medicine Co.), containing chiefly acetanilid, baking soda and a laxative plant drug.

Diemer's Pennyroyal and Tansy Compound (Dr. F. W. Diemer Medicine Co.), tablets containing chiefly plant material, including aloes and red pepper, with saltpeter and sand.

Diemer's Preparation for Specific Blood Poison (Dr. F. W. Diemer Medicine Co.), containing, chiefly, calcium carbonate, ferric oxid, potassium iodid and small amounts of arsenic and mercury.

Diemer's Laxative Grip-Malarine (Dr. F. W. Diemer Medicine Co.), consisting of acetanilid, baking soda, aloes and red pepper.

Manhood Tablets (Hollander-Koshland Co.), containing damiana, strychnin and zinc phosphid.

Patten's Lightning Salve (John H. Patten), consisting of camphor, turpentine, soap, resin, tallow, beeswax and petrolatum.—(*Jour. A. M. A.*, June 3, 1922, p. 1740).

SALICYLATES "NATURAL" AND "SYNTHETIC".—The Wm. S. Merrell Company rehashed the definitely refuted claim that "synthetic" salicylic acid is inferior to the "natural" kind. The Merrell Company suggests that, to avoid the effects of synthetic salicylic acid, physicians should specify "natural" and "Merrell" in writing prescriptions for sodium salicylate or any of the other salicylates. About ten years ago, the Council on Pharmacy and Chemistry instituted a thorough investigation of the asserted superiority of natural salicylic acid and salicylates over the ordinary or synthetic kind. This investigation afforded conclusive proof that the claim—based on a mixture of mysticism, commercial exploitation, misinterpretation and tradition—is without foundation. Nevertheless, the Merrell Company attempts to induce the medical profession to perpetuate this exploded fallacy and to specify the Merrell product, which costs twenty-four times as much as the synthetic sodium salicylate of U. S. P. quality.—(*Jour. A. M. A.*, June 3, 1922, p. 1742).

MORE MISBRANDED NOSTRUMS.—The following have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act:

Ammonol Tablets (Ammonol Chemical Co.), containing acetanilid, amonium carbonate, sodium bicarbonate and sodium phosphate.

Johnson's Female Regulator (Logan Pharmacal Co. and the France and New York Medicine Co.), consisting of pills containing extracts of vegetable drugs.

Fosfo-Ferrogen De Johnson, containing caffein and compounds of iron, quinin, strychnin, arsenic and calcium.

Bick's Nerve Tonic (Palestine Drug Co.), consisting of two preparations, one a brown tablet, containing phosphorus, phosphates, zinc and iron and the other a pellet containing phosphate, iron and strychnin.

Vitalo (Allan-Pfeiffer Chemical Co.), containing vegetable extractive matter including damiana, nux vomica, sugar, alcohol and water.—(*Jour. A. M. A.*, June 10, 1922, p. 1832).

THE INTRAVENOUS USE OF ACACIA.—It is now generally accepted that acacia has a limited and uncertain usefulness. The intravenous use of acacia is a recent therapeutic procedure and apparently sufficient time has not elapsed for the thorough appraisal of its use as a therapeutic remedy. Bearing in mind the accidents from the use of acacia that have been reported, the lack of agreement as to its beneficial effects, among surgeons who have tried it, the experimental evidence that has been reported as to its deleterious effects and the paucity of data indicating its clinical usefulness, conservative practitioners will still withhold their verdict. Moreover, the questions of intravenous therapy, which are involved in any discussion on the use of acacia in shock, hemorrhage and allied conditions, are an important and serious complicating consideration.—(*Jour. A. M. A.*, June 17, 1922, p. 1897).

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act:

East India Capsules (Hollander-Koshland Co.), containing sulpharated vegetable oil, copaiba and oils of cinnamon and santal, and claimed to be an effective treatment for gonorrhea.

Zerbst's Cough Sirup (The Zerbst Pharmaceutical Co.), a sirupy liquid containing alcohol, water, sugar, chloroform, licorice and other plant principles, and small amounts of tartar emetic, morphin, hyoscyamin and a magnesium salt.

Cummings' Pill-Mass (F. P. Cummings Co.), containing copaiba, volatile oils, vegetable extractives and a salicylic acid compound and represented as a remedy for gonorrhea, gleet, etc.

Craemer's Calculus Corrective (Wm. Craemer Medicine Co.), an alkaline watery solution, composed essentially of potassium, sodium, ammonium, phosphate, chlorid, citrate, salicylate and a small amount of saccharin and represented as a remedy for gallstones, stones in the kidney, etc.

Salax Compound (Salax Water Co.), consisting chiefly of a mixture of sodium sulphate, baking soda, sodium acid phosphate, with smaller amounts of common salt and washing soda. It was falsely claimed to be derived from Salax water, a mineral water at Excelsior Springs.

K K K So So Se (K K K Medicine Co.), a dark brown water-alcohol solution, consisting chiefly of sugar and glucose with a small amount of creosote, methyl salicylate, red pepper, oil of sassafras and plant principles.

K K K Pectus Balm (K K K Medicine Co.), a water-alcohol solution, consisting chiefly of sugar, small amounts of ammonium chlorid, benzoic acid, tartar emetic, saccharin, bitter plant principles, traces of camphor and oils of anise and eucalyptol.

K K K Tonic (K K K Medicine Co.), a water-alcohol solution containing sugar, small amounts of emodin-bearing (laxative) drugs, bitter plant extractives, pepsin and traces of cinchona alkaloids, hydrochloric acid and oils of cloves and cassia.

K K K Laxative Perio (K K K Medicine Co.), a watery alcohol solution of sugar, sodium phosphate, laxative drugs and small amounts of plant principles, saccharin and oils of orange and anise.

Paradise Oil (California Good Health Co.), consisting of a combination of sulphurated linseed oil and turpentine.

(Continued on Advertising p. xx)

Armour's LABORATORY PRODUCTS

"Why Take a Chance, When You May Be Sure, in Treating Thyroid Insufficiency?"

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(Continued from page 250.)

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VITA ZEST NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry reports that Vita Zest (Vita Zest Co., Inc., New York City,) comes in the form of capsules and is stated to be composed of 83 1/3 percent of "highly concentrated vitamin extracts (Fat Soluble A, Water Soluble B and Water Soluble C)". The amount of material in each capsule is not declared nor is any information offered to show that the amount (or potency) of the three vitamins, the claims advanced for it are such that is determined or controlled. Even if it were shown that the product contains appreciable amounts of vitamins, the claims advanced for it are such that most enthusiastic advocates of the administration of vitamin would scoff at them. The Council declared Vita Zest inadmissible to New and Nonofficial Remedies, because (1) its composition is indefinite; (2) it is exploited under unwarranted therapeutic claims and in a manner which tends to its indiscriminate use, and (3) because the name suggests its haphazard use as a general tonic.—(*Jour. A. M. A.*, June 17, 1922, p. 1912).

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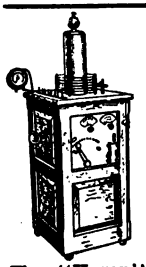
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ORIGINAL ARTICLES

THE CLINICAL HISTORY OF TUMORS OF THE FACE AND JAWS AS A GUIDE TO THEIR CORRECT DIAGNOSIS AND PROPER TREATMENT*

W. D. GATCH, M.D.

INDIANAPOLIS

In the treatment of a tumor, benign or malignant, of any region it is essential that we have an accurate knowledge of the life history of the lesion. The microscopic picture itself is often misleading. To outline the proper treatment and to give an accurate prognosis the surgeon must know the clinical history of a large number of similar tumors in the same situation and at various periods of life. For example, squamous cell cancers of the lower lip, cervix uteri, of the tongue and of the skin present almost identical microscopic pictures, yet the prognosis is vastly different. Furthermore, as Bloodgood has pointed out, the criteria whereby individual pathologists judge the malignancy of a tumor vary greatly. As a result, the percentage of cures obtained by any surgeon will depend largely upon his pathologist. To illustrate this point, Bloodgood studied the ultimate results in over one hundred and fifty cases of chronic cystic mastitis, a condition often regarded as cancer or potential cancer. In this series, every possible type of operation, from partial excision of the lesion to the radical operation for cancer of the breast had been done. Not a single patient, however, had developed cancer or had died of cancer. It is evident that if this condition is called cancer, the percentage of cures obtained for cancer of the breast will be high. On final analysis, our knowledge of the malignancy of a growth and the results to be expected from various methods of treatment is based upon accumulated clinical experience. The very opinion formed from the study of a microscopic picture should be based upon the same ground—a fact too often ignored. The tendency to regard a given microscopic picture apart from the other facts of the case as a safe guide to prognosis and treatment is productive of much harm. It leads either to unnecessarily mutilating operations or to neglect of operation in curable cases. We should plan our treatment and found our prognosis not alone upon a microscopic section but upon such facts as the situation of the tumor, the rapidity of its growth, the degree of its fixation, and above all, upon known results obtained under nearly identical conditions. A given cancer must be studied, not merely in the light of cancer in general, but in the light of cancer in the particular situation involved. The microscopic study furnishes only one piece, and that often a very unsatisfactory piece, of the entire evidence.

Furthermore, pathologists competent to form a safe opinion from the microscopic examination of a piece of tissue, are by no means common, and an incompetent pathologist is dangerous. Obviously it is not always possible to send a piece of tissue to a distant laboratory for examination, for the diagnosis, to be of use, must often be made while the patient is on the operating table.

From the foregoing consideration it follows that we must have other guidance to diagnosis and treatment than the microscope. This instrument unwisely relied upon is often the cause of disastrous mistakes. This paper is intended to illustrate in a general way, and in a particular field, how such guidance may be obtained—also that it is fairly certain and reliable, and easily to be obtained, by taking a careful history of the origin, duration and growth of the lesion, and by careful observation of its own characteristics.

The face and jaws give origin to a great variety of neoplasms arising from the orbital structures, the skin and mucous membrane, the teeth, the gums and the bones. It is not my purpose to attempt an exhaustive discussion of these tumors. This would require an entire treatise. I shall attempt to illustrate the differential diagnosis and the surgical treatment of these conditions in the light of the facts we have just discussed. For our purpose, the following classification of tumors of the face and jaws will be sufficient:

A. From the skin and mucous membrane arise

(*) Presented before the Section on Surgery of the Indiana State Medical Association, Indianapolis session, September, 1921.

two types of cancer, the squamous celled (carcinoma spino-cellulare) and the basal celled (carcinoma baso-cellulare) or rodent ulcer. Also various nevi, most common of which is the hemangioma, and finally, any tumor of the skin which may occur anywhere.

B. The common tumors of the parotid gland are the mixed tumors, cancer and sarcoma.

C. From the teeth arise the odontomes proper, dentigerous cysts, and adamantine epithelomata.

D. From the gums arise cancer, sarcoma and epulis, as well as benign hypertrophies of the epithelium due to chronic irritation and infection.

E. From the jaw may arise sarcoma, osteoma and bone cyst.

This is not intended to represent a systematic or scientific classification, but merely to serve as a convenient outline to meet the purposes of this paper. The lesions enumerated vary in malignancy from the most rapidly fatal and destructive tumors to those which are perfectly benign. In the differential diagnosis of a given tumor, the condition must first be distinguished from various inflammatory processes such as tuberculosis, syphilis, actinomycosis and pyogenic lesions. This is not always easy, but the scope of this paper limits us to a consideration of the differential diagnosis of members of the neoplastic group among themselves. In a general way it may be said of these non-neoplastic lesions that they display early ulceration or sinus formation in a way not common with tumors, and that they are attended with more constitutional disturbance than the latter.

A. Let us first consider the tumors arising from the skin of the face and the mucosa of the lips, alveolar processes and cheeks. The moles, including the common hemangioma or birthmark will obviously present but little difficulty in diagnosis. If any of these begin to increase in size, to become hard or ulcerate, it is probable that a sarcoma has developed, and such changes should be accepted as a positive indication for their thorough and early extirpation with the knife, or better, the cautery. Cancer arising in this situation differs in history from the moles in that while the latter are commonly congenital, cancer is a lesion which appears later in life. While the moles are obviously sub-epidermal in origin, the cancer, with the rare exception of tumors starting in sweat or sebaceous glands, is epidermal in origin, starting on the skin as an area of roughening or a small area covered with crusts, and on the mucosa as a shallow ulcer with a slightly indurated base. The location of the cancer is of the greatest importance in judging its type and relative malignancy. The old clinical rule that cancer arising above the line of the lower lip is relatively benign, whereas that arising below this level is malignant holds good, and depends upon the fact that cancers in the former situation are nearly always of the basal cell or rodent ulcer type, whereas those arising in the latter situation are nearly always of the squamous cell type. The familiar appearance of the rodent ulcer, with its elevated crater-like border of normal skin, and indurated grayish, encrusted or weeping base, is so characteristic that it can hardly be mistaken for any other condition. The squamous cell cancer of the lip or mouth is practically always an elevated, more or less fungating and friable tumor, which bleeds easily.

The above given, distinct and easily recognized characteristics make the diagnosis of these tumors easy. The microscopic study merely makes a certainty doubly sure. What we have stated concerning accumulated clinical experience, as the only basis for the proper treatment of any tumor, is admirably illustrated in this case.

Basal celled cancer practically never spreads to the regional lymphatic glands. It is essentially a local process and although it may produce the most extreme mutilation of the face, it is nearly always, even in its more advanced stages, curable, either by thorough local removal or by x-ray or radium treatment. That these rodent ulcers be allowed to progress until they have destroyed perhaps the orbital contents and even encroached upon the cranial cavity is a reproach to our civilization. They are best treated in their early stages by radium, which if thoroughly applied will cure them with practically no deformity. However, when they have advanced until the eyeball or the cranial bones are encroached upon, they may require a judicious combination of the knife, the cautery and radium to effect a cure. When the nose is the site of a rodent ulcer of large size, the best treatment is the amputation of the nose with or without rhinoplasty according to circumstances. It is the writer's opinion that these patients attract less attention when they conceal the loss of the nose by a simple black pad than when they have been provided with an artificial nose or undergone a rhinoplasty, no matter how excellent the rhinoplasty.

Squamous celled cancer in my experience does not yield very readily to radium treatment. It requires operative removal of the local lesion together with all lymphatics which may possibly be involved and which are accessible to removal. The great majority of squamous celled cancers of the face occupy the lower lip. In this situation they are readily curable by extirpation carried out in the relatively early stages of the growth. Even when the growth is far advanced, has become fixed to the jaw, the outlook is by no means hopeless, as the case reports

I shall present will show. Squamous celled cancer of the cheek or alveolar process is a much more dangerous lesion than the same type of growth on the lower lip. Still, it is in some cases curable. With these tumors, as with rodent ulcer, it is disgraceful that operation should be postponed until it becomes extremely radical and mutilating. However, the surgeon should bear in mind that no matter how mutilating his operation may be, it will not be as mutilating as the growth itself, let alone. Furthermore, that the extensive operations required do not produce anything like the discomfort to the patient which we might imagine. A discussion of the technique for the removal of advanced carcinoma of the lip, cheek or gum is in order here. In this situation, the general law which holds good for cancer anywhere is that the growth must be widely circumscribed and totally removed together with all its ramifications. To get successful results in these cases, it is necessary to perform the operation totally regardless of the resultant cosmetic effect. Once the lesion has been removed, it is time to study how the appearance and comfort of the patient can be improved. Another principle which must not be lost sight of is that in the course of the operation, cancer cells must not be implanted in the wound. This can be prevented by a preliminary thorough cauterization of the growth. In fact, as has been pointed out by many authorities, many of the bad results have been due to this cause. Another truth to be borne in mind is that the older the patient, the relatively better the prognosis so far as cure of the cancer is concerned. In extremely old people these cancers are rather surprisingly benign in character.

I wish to say a word in regard to the repair of the extensive defects which result from the radical removal of these tumors. It is possible in almost every case by the bringing down of flaps from the upper lip and cheek or up from the neck to close the defect. We should not lose sight, however, of the fact that a pair of lips which present a fairly normal appearance may be functionally almost useless. The mouth is surrounded by a sphincter muscle and the innervation and integrity of this should be preserved. The mouth which is of the greatest functional use to the patient will be one which he can move with the greatest freedom in phonation, and mastication. It has been the writer's experience that these patients may have a better functional result when a portion of the lower jaw has been removed. When this is not done, the extensive scar may contract so as to fix the jaws in an immovable position. While bone-grafting to restore the contour of the jaw may be eminently proper after injuries or in young people, it would seem to have a very limited use in the cases we are considering.

Tumors of the parotid gland are either very benign or very malignant, easily curable or hopeless. The most typical tumor here is the mixed tumor, regarded by some as an endothelioma, which under the microscope shows an extremely complex structure, hyaline material, cartilage, epithelium and fibrous tissue. It has been suggested that this conglomeration of tissues results from an invasion of the fundament of the lower jaw by the developing parotid gland in embryonic life. The mixed tumor forms a growth of extremely long duration, nodular, not attached to surrounding structures, at times reaching an extreme size, but producing symptoms only by pressure or through its weight. The only problem in its removal is the avoidance of the branches of the facial nerve. I have on several occasions, when operating upon early tumors of this kind, shelled out the growth from within its capsule, a procedure which enables one to recognize and avoid the nerve. However, it is not a procedure to be recommended without reservations, because in one of my cases it was followed by a recurrence of the tumor. Sarcoma and cancer of the parotid gland produce a brawny induration and fixation of the skin, extreme pain and facial paralysis. The location of the growth, these features, together with the absence of infection are sufficient to render the diagnosis easy. Operation is out of the question. Radium may be tried.

For the sake of simplicity of treatment let us consider in one group tumors of the gums, teeth and jaws. From these structures arise a remarkable variety of tumors, the differential diagnosis of which may require an x-ray picture in addition to a good clinical history and a careful visual and tactile examination. These means, readily available to everyone, are in nearly every case sufficient to establish the diagnosis.

I have thought that I can present this subject most clearly by means of the following outline:

TUMORS OF THE GUMS

1. The benign epulis—a knobby tumor arising about the teeth—of variable density—slow growth—may loosen the teeth—covered with mucous membrane except when subjected to trauma.

2. Cancer—usually arises in the upper jaw—always somewhat fungating and ulcerated—bleeds easily—spreads rapidly.

3. Chronic ulcer due to ulceration and infection usually on cheek about carious teeth—may resemble cancer but does not spread far from the point of ulceration.

TUMORS OF THE TEETH

1. Odontomes—used in sense of a tumor of a tooth. Hard tumor inside the alveolar process—usually associated with an unerupted tooth—x-ray clears diagnosis.

2. Dentigerous cyst—tumor inside alveolar process of jaw—if large gives parchment-like crackling on palpation. Has fibrous capsule. x-ray usually shows it to contain an unerupted tooth.

3. Adamantine epithelioma — large, slow growing tumor with cysts containing black fluid —may replace entire jaw. Usually in mandible. Rare.

TUMORS OF THE JAW

1. Bone cysts—rare—x-ray shows no tooth inside cyst. Cyst has no fibrous capsule.

2. Sarcoma-periosteal or medullary in origin, of rapid growth. Destroys bone and quickly forms a soft, friable, bleeding mass on reaching the surface.

3. Sarcoma — medullary — giant cell—slow growing relatively limited to medullary cavity of bone. On examination has a gelatinous consistency and a rusty color. Lies in a well defined space in the bone.

We may lay down the following rules as a guide to treatment:

1. The only tumor of this region which requires radical removal is cancer. Such removal is best accomplished with the cautery or perhaps by electro-coagulation. Periosteal or medullary sarcoma is either so terribly malignant that no operation is of avail, or else so benign (medullary giant-cell type) that it is cured by a thorough local removal. (The latter type is quite easily recognizable on exploratory incision. The malignant sarcomas are best treated by radium.

2. The odontomes require only removal—the dentigerous and bone cysts require only opening and curettement with the least possible damage to the jaw. Adamantine epithelioma requires removal of the affected portion of the jaw.

3. Epulis requires only thorough local removal—if it recurs it remains local. The limits of this paper have rendered the above dogmatic presentation of the subject necessary. However, I believe that the facts stated conform to the teaching of our best authorities on surgical pathology. I have arranged them in this manner to support my main contention that evidence obtained from the clinical history and from ordinary gross examination of tumors, viewed in the light of accumulated clinical experience in similar cases, form a safe guide to diagnosis and treatment, and that such evidence is of at least as great scientific value as is that from the study of a microscopic picture. This is not to be interpreted as an effort to belittle the use of the examination of tissue with the microscope. It is instead an effort to make such examination more intelligent and better related to the other evidence in each case.

DISCUSSION

DR. T. C. KENNEDY (Indianapolis): I have had many conversations with Dr. Gatch about the treatment of squamous-cell epithelioma, and while he believes in the efficacy of radium in the basal-cell epithelioma, he is still partial to surgery in the squamous cell type.

A large percentage of the squamous cell epithelioma will yield to radium and every case should be so treated before resorting to surgery. If radium fails, which it rarely does, it is then wise to resort to surgery, but not before.

DR. ALBERT COLE (Indianapolis): We have a good many of these tumors of the face sent to us for diagnosis and I want to state that it is not as easy as Dr. Gatch has implied, at least not in our experience. We are often very much in doubt as to what we have. I remember one case several years ago where we had apparently a bone cyst of the lower jaw. For some reason the patient was put upon specific treatment and the condition cleared up in a short time. We have had others of a similar type.

I am glad to hear Dr. Gatch make the statement he did regarding the pathologists. We are always pleased to know that men in our diagnostic lines of work make mistakes as well as the roentgenologists.

DR. EDWIN N. KIME (Indianapolis): I would like to cite a case which has a bearing upon this idea of microscopical diagnosis. This was a woman, sixty years of age, who for two years had a tender, cauliflower-like mass on the upper jaw. It started behind the median incisor tooth. She was referred to me by one of the dentists in town. I would not attempt to give the history in detail because it would take too long, but all examinations were negative, negative each time for cancer. I made an examination myself and examination was also made by three pathologists. Each of them stated that it was negative, or practically so. It showed merely a hyperplasia of the epithelium of the gum. The only thing that touched that case in the form of treatment was the x-ray, and that seemed to hold it down. It decreased a little in size. The application of the actual cautery helped a little, but the x-ray did the most good. Examination by a nose and throat man revealed there was new granulation tissue in the maxillary air sinuses. The patient went back home, tried treatment by the x-ray, and the last I heard of the case was that the eyeballs began to push out and that she was dying of undoubted carcinoma of the antrum. In that instance our microscopical findings did not help us. They really led us astray. We thought we had a benign tumor when it was really a malignant tumor. However, a negative microscopic diagnosis means that it is negative; it does not have any other value. Just as a negative Wassermann means that you have not determined that the patient has syphilis. I do not feel the microscopical examination was dependable in this case, simply because none of the three sections

were obtained from the heart of the growth, which was primary in the nose or antrum. The surface tumor was in itself benign, being an irritative hyperplasia of the epithelium of the oral mucosa. The association of the first visible manifestation of the growth with the oral end of the anterior palatine foramen should be of some interest from a diagnostic standpoint.

DR. W. U. KENNEDY (Newcastle): It has been my fortune in the past few years to have had considerable experience in these flat-cell malignant growths of the face. I am a firm believer in the use of radium, a believer in the use of the x-ray, but not as a preliminary except in small and very early types of lesion. Whenever there is involvement of substantial structures I believe in early and wide incision, a block resection that eliminates the diseased tissues, and then the application of large doses of radium for a short period, or the intensive application of the x-ray. But we must not lose sight of the permanent necessity of early and wide resection followed by the use of radium or the ray. I believe in this way we will get the greatest percentage of success in our cases.

DR. H. K. BONN (Indianapolis): Since the first of the year I have had two cases of carcinoma of the lower lip, one in a man of 74, the other in a man of 48 years of age. The older gentleman is sure that this growth on his lip has been present for at least five years, while the carcinoma has been present for three years in the case of the younger man.

The man of 74 years of age declined to submit to a block dissection of the neck. There were no palpable glands, hence a wide local removal of the growth was done.

A wide local removal, preceded by a block dissection of the palpable glands of the neck, was done in the case of the man aged 48 years. Radium by Dr. Kennedy was begun a few days after the operation and continued after the patient left the hospital. The patient of 74 years of age declined to permit the use of radium. Both specimens, including the glands of the one case, were examined by two pathologists. The lip specimens showed carcinoma, squamous-cell type, but the removed glands failed to show malignancy and were reported as inflammatory. These two cases may perhaps, in view of the fact of the long residence of the growths, show that there actually exists a degree of variance in carcinoma.

The cosmetic effect, even though the local exesion was carried wide of the edges of the growth, has been satisfactory to both patients, who have declined a further plastic operation.

Hence in some cases, a primary or secondary plastic is not necessary, at least from the patient's standpoint. To date, there has not been a recurrence in either case.

DR. W. D. GATCH (closing): Cancer of the lower lip is easy to cure, compared with cancer in other parts of the body.

I want to emphasize the point of the age of the patient. These growths in people of 70 and 80 are surprisingly benign while they are relatively malignant in younger people.

I do not want Dr. Cole to understand me as saying that the differential diagnosis of these lesions is always easy. The point I want to make is that it is possible to formulate a safe plan of treatment in every case, though in a great majority of cases there are difficulties of exact diagnosis. The operation I have used on these advanced cases of cancer of the lip or cheek is extensive. I think the evidence goes to show that when once cancer has involved the glands the chances for cure are extremely remote.

As to the use of radium. In the advanced cases you have the combined use of surgery and radium. In squamous-cell carcinoma of the mouth I have failed to get very good results from radium, and I still hold to the idea that these should be treated surgically. I believe there is great hope in the so-called electro-coagulation. It is said you can thus excise the whole tongue, bloodlessly, and without danger of spreading the growth.

TREATMENT OF COMPOUND FRACTURES*

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Compound fractures have always been considered as more serious lesions than simple fractures on account of the possibility of infection which might lead to an extensive osteomyelitis or to a more grave septicemia. Just what percent of compound fractures have become infected is rather difficult to estimate, as it will vary greatly with the extent of the laceration of the soft parts, the amount of contamination, the environments of the patient and the skill of the surgeon. However, infection has, in the past, occurred so frequently in this type of wound that its possibility dominates the whole treatment of the case.

Before the introduction of antiseptics practically all compound fractures became infected and amputation of the extremity was the usual end result in order to save the life of the patient. Following the introduction of antiseptics since the days of Pasteur and Lister not only have infections become of less frequency, but amputations are rarely done. The basic principles however have not changed, the only variation being in the type of the antiseptic used in the attempt to make and keep the wound clean.

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A review of the text books gives almost universally two cardinal principles in the treatment of compound fractures—first, to thoroughly cleanse the wound by irrigation, swabbing, etc., and secondly, to leave in drains to take care of any infection which might occur. Scudder in his edition of 1905 of "Fractures" states that compound fractures should be "treated on the presumption that every open fracture is infected." After outlining a careful preparation of the wound in which irrigating and swabbing of the "moderately enlarged" wound is the first step, he then advocated "leaving the wound open enough to receive several temporary gauze wicks for drainage during the first few days. Counter openings may be needed if one is not sure of the aseptic condition of the wound. They do no harm and may prove safety valves against latent infection."

Stimson in his 1917 edition of "Fractures and Dislocations" states that in those fractures due to direct violence "an uncomplicated healing cannot be expected," while those due to indirect violence in which the wound is made from within outward, one may expect healing within a few days. This difference in course of the two types of wounds he thinks "may be found in the lowered vitality of the bruised muscles, in the products of metabolism, or in their lowered power of resistance." In the less severe wounds he uses drains in only the exceptional case, but in the more severe type—as those resulting from direct violence, he states that "drains of rubber or gauze are to be inserted." Rose and Carless also advocate the use of drains.

The quotations from these three authorities represent in a general way the universal teachings in regard to compound fractures. As may be seen, the whole line of treatments is based upon the theory that all compound fractures are unclean and that in the majority of cases as a result of the contamination which occurred at the time of the accident, a subsequent infection will arise.

That all compound fractures are to be considered as contaminated with pathogenic bacteria will be conceded. But it is the opinion of the writer that this primary infection can be controlled and that if after a thorough cleansing of the wound, any *subsequent infection arises, it is not due to the primary contamination, but to a later one,* occasioned through drains, leaving the wound open, etc. Thus an open fracture which is to be considered infected can be so cleaned as to be considered potentially clean and be treated as a clean wound.

The character and extent of the wound of the skin will vary from a small puncture wound to a large lacerated, contused area—but the treatment will be the same. In those cases in which the external wound is occasioned by a force acting from within out, which Stimson terms an indirect force, the lesion in the skin is made by the sharp cutting edge of the bone. The wound may be small or large but with little bruising of the skin, the edges being clean cut and smooth. If the compound features are produced by a force acting from without against the bone, the so-called direct force, one will usually find the wound of the skin larger and the edges ragged and badly contused. The latter type may be more soiled than the former type and through the more extensive lacerations present a greater field for bacterial invasion than is found in the former type, yet each is to be considered as an infected wound.

In both the direct and indirect types of wounds, either with the small or with the large skin opening, one may find the same laceration of the periosteum, of the fascia and muscle and of the subcutaneous tissues, with the presence of a large infiltrating blood clot and possible injury to important nerves and blood vessels and tendons, and it is in these lacerated and bruised underlying tissues that we find the media favorable for the growth of bacteria and the production of infection.

The fracture of the bone may be transverse spiral, oblique or comminuted. In comminuted fractures the loose fragments of bone should not be removed, but should be replaced in as near their anatomical position as is possible. Even those fragments which are stripped of periosteum will take their part in the reparative process of healing just as well in compound as in simple fractures. That they will undergo necrosis and thus act as sequestra and sources of infection merely because the fracture is of the compound type, has not any logical basis for its presumption. Surely no one has ever advocated that a simple fracture, which is badly comminuted, should ever be opened and a search made for small detached fragments of bone that they might be removed.

The extent of damage to the periosteum will vary with the severity of the lesion. Its torn edges are usually ragged and stripped for some distance from the shaft of the bone. The laceration of the muscles and fascias is as a rule considerable. The extent of the bruising of the muscles should be carefully noted. No doubt a great part of this occurs as a result of the trauma incident to the handling of the limb before splinting and fixation has been made. The skin is dissected from the subcutaneous tissues to a greater extent than the size of the wound would indicate. The hemorrhage associated with any fracture is always large and not only fills the space about the line of fracture, but dissects to a considerable extent into the subcutaneous tissues and between the muscle planes. This blood clot presents a most favorable material for bacterial growth.

Important blood vessels and nerves and tendons may be cut by the sharp edges of the fragments and present most annoying problems. An extensive lesion of the larger or main arteries and nerve trunks may necessitate amputation.

The skillful treatment of compound fractures depends upon the knowledge and recognition of several important facts. First, all open fractures are to be considered as contaminated, the pathogenic bacteria having been carried into the tissues either through the direct force causing the wound, or by the protruding fragment of bone becoming soiled and carrying the organisms back into the tissues as the fracture is reduced. Secondly, a certain amount of the lacerated soft parts will either undergo necrosis or have a lowered nutrition and thus have less resistance to take care of any infection. Third, any blood clot presents the most favorable media for bacterial growth. Fourth, if the wound has been thoroughly cleaned, all devitilized tissues and blood clot removed, the wound may then be considered as potentially clean and *can be closed without drains.*

The treatment of a compound fracture, due either to a direct or indirect force or associated with a large laceration of the skin, or a small clean cut puncture wound, may be outlined as follows:

Careful examination of the vascular, motor and sensory functions, distal to the wound should be made before the anaesthetic is given. If there is evidence of severance of the large nerve or artery trunks, the patient should be advised that amputation may be necessary. If tendons have been cut the ends may have retracted along their sheaths and thus this feature be easily overlooked during the operation.

After the patient is anaesthetized the operative field is shaved without soap or water and the skin covered with fifty percent of tincture of iodine. The edge of the skin about the wound is excised so as to present a fresh, well nourished border. As a rule one-fourth inch will suffice. The wound is enlarged, if necessary, in order to give a clear exposure of the underlying structures. A large wound will heal as well as a small one and is only contraindicated where the scar may be a factor in producing a disability. Debridement or excision of all contused or devitilized tissue should then be most carefully done. This is a very important step and where important structures are not involved it is better to remove too much than too little tissue. The blood clot is removed by swabs of dry gauze and the wound filled with ether. This will cause any loose tags or shreds of fascia or muscle or periosteum to float and thus be more readily seen and removed. Any bleeding points should be sutured and a careful search be made for injury to nerve trunks or tendons. It will be well to remember that large vessels may be severed and the hemorrhage controlled by blood clots which after six or seven days interval may undergo lysis and lead to severe bleeding. I have seen several instances in which this occurred in the femoral artery and in the posterior tibial artery.

The reduction of the fracture is now done. If it is necessary Kangaro tendon sutures or the Parham bands may be used to maintain reduction and will in no way complicate the healing of the fracture. Care should be used to obtain as perfect anatomical reduction as possible and all loose fragments should be utilized. If the periosteum is not too badly lacerated one may attempt to suture it. However this cannot be done except in a few cases.

The repair of any tendons should be done with silk sutures and an attempt to suture the tendon sheath with No. "00" plain cat gut should be made. The muscles and fascias are brought together with some absorbable suture material, as plain or chromic cat gut. The skin is then closed tight with interrupted silk worm sutures and an alcohol dressing applied. Drains, either to the bone or the subcutaneous tissues, *are not to be used.*

The fracture is now to be treated as a simple fracture. Some form of splint which will maintain the reduced position of the fragment is to be used, but which will also allow of inspection of the wound and the use of moist dressings should it become infected. The writer uses almost exclusively the Thomas Splint as subsequent dressings may be made without moving the fragments or changing any extension that is being used. If plaster of Paris is to be used the operation should be done on a Hawley fracture table, which will admit of the application of the cast without changing the position of the limbs after operation. One should also reinforce the cast so that a window may be cut to allow inspection of the wound and any necessary dressing. The plaster of Paris cast will be rather difficult to use should the wound become infected and wet dressing be necessary.

The patient should be watched very carefully for the next few days. The temperature should be taken every three hours and notes made as to any local signs of inflammation. Throbbing and ache at the site of the wound, associated or not with a rise of temperature, demands immediate inspection of the wound. A rise of temperature alone may be due to absorption of blood or to the so-called "post operative" elevation. If signs of infection are present one or two of the sutures should be removed and a small probe inserted to determine whether pus has formed in the deeper structures. If pus is found then the wound should be considered as infected, all sutures removed, the wound opened

wide down to the bone and the treatment directed to control the infection. This phase of the treatment will vary with the operator. The writer has used the Carol-Dakin technique with gratifying results. The merits of other methods will not be discussed in this paper.

Compound fractures produced by bullets should be considered as clean wounds and operation is contra-indicated, unless the removal of the bullet is deemed advisable.

The differences in the treatment as outlined above and that of the orthodox teachings are: (1) The cleansing of the wound depends upon a careful and complete debridement rather upon the irrigation and swabbing with antiseptic solutions; (2) the layers of soft tissue structures are carefully sutured, and (3) the skin wound is closed without the use of drains.

It is my opinion that it is impossible to so cleanse the wound of a compound fracture that all bacteria are removed. If any devitilized tissues or blood clots are left in the contaminated field the bacteria are furnished with the most favorable media for their growth. On the other hand, if the surface of the wound consists of normal, healthy tissue the resistance to any bacterial invasion is much greater and bacterial growth is retarded. The return to normal conditions in the tissues is also hastened through correct anatomical replacement of the different layers. This careful suturing of the structures may also limit and localize any infection which may arise and thus prevent an osteomyelitis.

Infections in open fractures have resulted more frequently from contamination of the wound through the use of drains than from the primary wound itself. The skin is never clean and always presents a source of possible infection which may be carried in along the drain. If the wound is closed tight this factor in infection is eliminated. Under careful watching if any infection does arise with the wound closed, the stitches may be removed and the infection will not be any more extensive than had the wound been left open with drains and counter-drains.

Some surgeons have advocated the use of drains to take care of the hemorrhage, but there is not any justification for presuming that hemorrhage in a compound fracture is in itself any more a source of infection than in a simple fracture.

Through and through drains before infection is manifested, can only be condemned.

If the compound fracture involves a joint structure the treatment is the same. However in this type care should be used to wash out thoroughly from the joint any blood and to close the joint capsule as completely as possible.

Should the wound not become infected the after treatment is the same as for a simple or closed fracture. Active mobilization should be begun as soon as possible, in order to preserve the joint function and also to prevent any involvement of tendons or muscles in the scar tissue which is incident to the fracture. If the skin has been severely contused, daily observation should be made for gangrene or eschars which will come often at the end of several days. These may prove to be a source of infection into the deeper structures. This is especially likely to occur about the knee joint where the bursal sacs are close to the skin.

Twenty-eight cases of compound fractures have been treated by the method outlined above and all with one exception have been converted into simple fractures without infection. In this one case there was a very extensive laceration of the skin and soft parts, with a considerable disturbance in the circulation. At the end of nine days the wounds broke down and a culture of the colon and catarrhalis bacilli found, so it seems to be reasonable to say that this was gangrene rather than a case of infection in the true sense of the word. The other cases were of the tibia, fibula, femur, radius and ulna, and of the humerus. Two compound fractures of the patella were comminuted and there was a severe laceration of the capsule of the knee joint. Each of these cases were complicated by a simple fracture of the femur on the same side and one of them had also a dislocation of the hip on the same side. Two cases of compound Potts fracture occurred.

The conclusion that has been drawn from this series of cases is that compound fractures, when seen early and are carefully cleaned by debridement or excision of all devitilized tissues can be safely considered as clean wound and thus closed without drains.

DISCUSSION

DR. H. O. BRUGGEMAN (Fort Wayne): I am in complete accord with the basic idea of Dr. Mumford's paper—compound fracture wounds, when properly debrided, can be closed without drainage. I am also certain that a great many lives and limbs will be sacrificed if the average practitioner attempts to treat these wounds as Dr. Mumford treats them. Debridement, or rather epulchage, is a delicate, painstaking operation requiring much skill and practice—it is not the rough-hewn excision of a wound which can be carried out with a contempt for anatomy and a disregard for the future function of the limb. The war taught us that when a debridement is performed the wound should be left widely open, with the idea of a secondary closure, or it should be closed tightly without drainage. Fortunately the vast majority of compound fractures which are seen in civil life require no treatment other than the application of a sterile gauze dressing and immobilization in a proper position. When, however, a compound fracture has been handled outside the hospital,

or when it is grossly contaminated, or when there is much injury to the soft parts a debridement is imperative. If a debridement is necessary then detached fragments of bone should be removed. When speaking of war wounds a distinguished Canadian has said, "Among foreign bodies the most sinister are fragments of fractured bone." Dr. Mumford says that it is impossible to so cleanse the wound of a compound fracture that all bacteria are removed. It is therefore wrong for him to introduce a foreign body, in the shape of a Parham band, into such a wound. There is one vitally important factor in the treatment of compound fractures which was not mentioned and that is the administration of a prophylactic dose of tetanus anti-toxin.

DR. H. R. ALLEN (Indianapolis): Some years ago I devised a system of putting transfixation pins through the skin, muscles and bones. Each pin has a flat drill point on one end and a soluble metal head or gimlet handle on the other end. When you push it through the skin and other soft tissues you drill through the bones and then push it through the soft tissues on the other side. In treating a fracture of both bones in the forearm you take first one bone and then the other and that gives you fixation for each of the bones: then solder a piece of low-melting alloy between the drill handles and separatus and that gives you normal separation between the shafts of the bones. Whether these fractures are originally compound or simple they may be compounded in order to see that perfect aposition exists between the fractured ends. Do not put pins through the fracture zone but go back an inch or so and then put the retention drills through normal, healthy tissues. The pins used are steel, silver-plated. If there is any drainage material that is tolerated by the human body it is silver, and if there is any system of drainage that is thorough, it is through-and-through drainage. If you use a through-and-through silver drain you have almost answered the question of good drainage. For a number of years I have been using this method in appropriate cases and have never had a patient develop a whole degree of temperature. When it comes to leaving metallic foreign bodies permanently in arms or legs you all know there may be serious trouble, especially if you put them in the zone of the fracture, so why not put them back a little from the zone of fracture? These pins give you outside control over inside control. When you are through you can, with warm water, melt the soluble alloy stabilizers and separators and pull the pins out. Then your patient is not permanently half hardware and half human. He is all human.

DR. E. B. MUMFORD (closing): The object of my paper was to get away from the idea of drains in compound fractures. No matter what you do, you should not put in a drain to take care of some infection that may come later on.

Doctor Bruggeman spoke of treating the fractures of the simpler form by putting in a piece of gauze and letting them go. That is all right, and you can get away with it in some cases; but my plan is to get away from the drain first, and second, to use more thorough cleansing methods than swabs and antiseptics.

In regard to the use of metal bands, I do not see any reason why, if you have a compound fracture which does not become infected later on, the putting in of a band should produce any more infection than if you did not use it. My whole plea is to do away with the drain in compound fracture to take care of an infection which does not exist.

LOCAL ANESTHESIA AS A SUPPLEMENT TO GENERAL NARCOSIS*

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While the attempt to alleviate pain by the use of local anesthetic agents is as old as the history of the race, no real success was attained until the discovery of cocain.

The history of local anesthesia really begins with the discovery of cocain. This alkaloid, which is derived from the cocoa plant, is indigenous to Peru and Bolivia and has been cultivated since prehistoric times and has been prominent in the religious and political life of the people of South America. "This plant was regarded as a gift of God, which satiated the hungry, gave renewed energy to the tired and weary and caused the unfortunate to forget sorrows." The chewing of the dried leaves became a racial peril and its cultivation was, for a time, forbidden. Observations were made from time to time by travelers in South America of the curious physiological effects of this plant upon the natives. Some of the leaves were taken to Europe and from them Nieman and Lossen of Gottingen first extracted cocain.

For twenty years following, German investigators were extremely active in accumulating clinical and experimental data on the use of cocain as an anesthetic agent in the performance of major and minor surgery. Great enthusiasm was aroused and it was confidently expected by many that local anesthesia would supplant general narcosis in the performance of all surgical operations.

In spite of the fact that warnings had been given of the dangerous toxic qualities of the drug, it began to be widely used, with the inevitable result that fatal poisoning, following

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its use for anesthetic purposes, became all too frequent.

Unquestionably a great many deaths have been caused in this manner in comparatively recent years which should have been avoided and indeed would have been avoided had the profession been thoroughly informed of the experience of German surgeons in the early years following the discovery of cocain. Never will I forget my own experience, when, as an interne at the City Hospital on a dull afternoon with no one in the dressing room of Ward 4 but myself, I attempted to excise a perfectly inoffensive bit of scar tissue, following a circumcision. which for cosmetic reasons the patient wished removed. Not over one-half dozen m. of a 2% solution were used to infiltrate the area and yet within five minutes after beginning the infiltration, the man was unconscious and narrowly escaped death.

I later found that this experience was in no sense unique, and that within the comparatively narrow circle of one's own acquaintances, similar experiences were related. It is unnecessary to remark that since this time my interest in cocain as a local anesthetic in general surgery has been purely academic. My education, as far as its practical use is concerned, was long ago completed.

It should be mentioned, however, in passing, that during the developmental period of local anesthesia, cocain contributed a great deal to the advancement of the specialties, notably ophthalmology, rhinology and laryngology. As a result of its anesthetizing properties, when applied to the surface of serous and mucous membranes, it can be used with comparative safety.

As a result of the interest in local anesthesia aroused by the discovery of cocain and the accumulated knowledge of its dangerous toxicity, a large number of other agents were soon made. The discovery of cocain and its later preparation synthetically gave the key to the chemists for the discovery of these agents: tropacocain, eucain, holocain, stovain, alypin and novocain are the best known. All can be dismissed from the discussion except novocain.

Novocain meets all the indications of an ideal local anesthetic agent. It is nontoxic in doses sufficiently large to leave a safe margin when used even in large quantities. It is non-irritating to the tissues and wound healing is not delayed nor altered in any manner. It can be sterilized by boiling without altering its physiologic properties. It combines with adrenalin, which greatly enhances its anesthetizing properties.

The question of toxicity is of the very greatest importance. It is for this reason alone that cocain has become obsolete. It must not be forgotten, however, that novocain is a drug that has, when used in concentrated solution and large dosage, dangerously toxic properties. The secret of its safe usage lies in the use of weak solutions when in combination with adrenalin. When so combined, .05 to 1 percent solution will give perfect anesthesia maintained for one to two hours. When used in such strength, Braun has repeatedly used 250 c.c. or 1.25 gram of novocain, 18 gm. without untoward effects.

The use of suprarenin or adrenalin with novocain is absolutely essential to proper anesthesia when weak solutions are used. The use of adrenalin does not make the novocain less toxic, but it does greatly enhance its anesthetizing properties, thereby permitting complete anesthesia with small dosage.

When one comes to consider the practical use of local anesthesia, there are a number of factors which arise for consideration other than the rather narrow one of anesthesia. The safety of the procedure is admitted by all, and from my own experience, patients so operated have been universally satisfied with this type of anesthesia, which I believe is strong testimony that they suffered but little discomfort. There are, however, certain real obstacles which I wish briefly to discuss.

It is unquestionably true that there exists in the minds of a considerable number of people a prejudice against the use of a local anesthetic. This will usually be found to have resulted from a previous unpleasant experience during some minor operative procedure. They have been the victims of an alleged local anesthetic, such as carbolic acid, freezing with ethyl chloride, local application of cocain and possibly placeboes for the incision of localized abscess, such as boils or paronychias and the repair of small lacerated or incised wounds. This is purely a matter of faulty technique, as adequate local anesthesia cannot be obtained by any of these methods and it results in an unhappy memory which remains to confound the surgeon who proposes to use such a method again. Such an experience is not infrequently the beginning of noxious psychological factors which must be eliminated or controlled before local anesthesia can be successfully used.

There are also a considerable number of individuals who prefer, or at least think they prefer, to be unconscious during a surgical procedure of any magnitude performed on their own body and therefore desire some form of general narcosis. This reluctance to consciously face the ordeal of an operation, even though it be painless, throws an illuminating light on the psychology of the operative patient. It shows most conclusively to the surgeon that the task of rendering anesthetic the tissues in the field of operation is only a small part of what is necessary for the comfort of the patient and the success of the method. Indeed, I think it can be safely said that it is much easier to do

a painless operation under local anesthesia than it is to control the psychic reactions. In my experience, the real objection to local anesthesia in selected cases is not the difficulty of adequate anesthesia but of controlling the purely mental reactions of the patient. Novocain in combination with suprarenin is an ideal local anesthetic and it can be safely depended upon, when used with proper technique, to make possible many major surgical procedures without pain. It should be, and I think is, almost universally used and has become standard. But no method of controlling the purely psychic reactions of the patient has been satisfactorily developed and until this can be done, I predict local anesthesia will never develop the popularity either with the profession or the public to which its merits entitle it.

Granting, therefore, that the elimination of physical pain can be successfully accomplished by the use of novocain and suprarenin in combination, let us turn our attention to a classification and discussion of the various methods proposed and used for the control of the patient's mental reactions. These can be classified under three heads:

(1) Suggestive Therapeutics.

(2) Pre-anesthetic administration of drugs such as morphine, scopolamin and mag. sulphate, the latter used synergistically with morphine.

(3) Light inhalation gas-oxygen anesthesia.

By proper and skilful use of suggestive therapeutics, there lies a vast field of usefulness for the surgeon. Indeed, all successful surgeons are adept psychologists. Our medical friends are repeatedly and I believe rightly calling attention to the psychic damage suffered by patients especially of neurasthenic tendencies as a result of operative procedures. This damage, I believe occurs almost entirely previous to the actual operation. The ordinary operation, followed by a smooth convalescence, does not, as a rule, unfavorably affect the patient's psychic reactions but the acute emotional reactions initiated the moment the question of surgery is broached, which continues all too often to the very moment of anesthetic unconsciousness, plays havoc with his psychic centers. The basic cause of this pre-operative psychic disturbance is fear, a very elemental but profoundly important human emotion. Its manifestations are often masked and show themselves in aberrant mental reactions. If the surgeon can, by the influence of his own personality, banish fear from the consciousness of his patient, he has accomplished successfully the first stage of not only local anesthesia but general narcosis.

I very well remember the remark of a man made some six months following a simple hernia operation. After all arrangements had been made, room engaged, business affairs adjusted for a month's absence—in fact, very systematic and completed plans for an elective operation, he entered the hospital and registered and while going up on the elevator to his room, he told me he was seized with a panic of fear which shattered his nerves and required the exercise of all the will power at his command to prevent him bolting and running at the first opportunity. This patient, it is unnecessary to remark, did not have a successful first stage anesthesia. Unfortunately, the surgeon does not control all of the avenues to the patient's consciousness. His friends and relatives have access to it and are quite as apt to augment as to alleviate his fears.

But the most pernicious factor in the production of noxious psychic disturbances in the local anesthetic patient is the average modern hospital. He no sooner enters the door than his consciousness is assailed by unpleasant odors, disquieting noises and, as a rule, not a single beautiful thing meets his gaze. At a time when his intellectual sensorium is extremely sensitive, he is flooded with painful stimuli which disorganizes his courage and weakens his stamina. Add to this the sights, sounds and odors of six or eight operating rooms on the morning of the operation, and you can get some conception of the impossibility of the average hospital for successful local anesthesia. Suggestive therapeutics is very difficult to accomplish in such an environment. Recently, while doing a double herniotomy under local anesthesia, the patient was greeted by the frightened screams of a child being etherized preparatory to a tonsil operation, and a little later he was an unwilling spectator of this somewhat sanguineous procedure through the open door. It required an extra cigarette before he entirely recovered his mental equipoise.

The routine observed in the operating rooms of the average modern hospital would have to be greatly altered to meet the requirements of successful local anesthesia. All noxious sights, sounds and odors eliminated and a real effort made to soothe rather than irritate the patient's sensibilities.

(2) Pre-operative administration of drugs.

I have purposely classified the use of drugs such as morphine and scopolamine in local anesthesia as one of the methods of controlling the patient's psychic reactions. This I believe to be their principal function. Their use does not permit of any less quantity of novocain nor less infiltration of the operative field. But the morphinized patient is drowsy and remarks that he wants to take a nap. In this condition, he is much less susceptible to all kinds of conscious stimuli and to that extent will his intellectual sensorium receive less insult. The threshold of psychic impressions will be raised so that he misses a considerable number that might be disturbing in character.

Gwathmey has recently advocated the use of magnesium sulphate solutions to be used in conjunction with morphine. He gives 5 c.c. of 25 percent solution diluted to 200 c.c. and given intravenously. His clinical experience would seem to indicate that when thus used the effects obtained from morphine even in small dosage are greatly enhanced. This, he states, is the ideal pre-anesthetic medication for gas-oxygen anesthesia. If this should prove to be true, it would be equally valuable in local anesthesia.

(3) Light inhalation anesthesia as a method to control the patient's psychic reactions.

Crile has quite recently been operating in a certain group of cases under a form of anesthesia which he designates as analgesia. In addition to completely blocking the sensory paths in the field of operation by novocain, he administers a very small amount of gas—oxygen. The patient is entirely conscious and knows everything that is going on. His mental state is one of exhilaration.

It seems to me that the part played by this gas-oxygen in the so-called analgesic anesthesia, as used by Crile and others, is largely a psychic one. Just as the novocain produces a sensory block, so does the light gas-oxygen produce a psychic block and renders the patient immune to the noxious stimuli of his immediate environment. The real anesthesia is produced by the novocain while the patient's mental reactions are controlled by light gas-oxygen.

A very interesting phenomenon in the use of local anesthesia in the performance of major surgery is the very profound effect upon the psychology of the surgeon. The mental reactions of the local anesthetic patient have been discussed at some length. Of no less significance is the striking change in the mental process of the surgeon, when in the one instance he is operating on an unconscious patient and the other a fully conscious and intellectually alert individual. He immediately becomes aware that he is operating on a living, conscious, human being whose physiological processes are intact and the tissues of whose body react in direct ratio to the injury done them. Blood vessels, nerves, fasciæ and muscles all have a new significance.

When we stop to reflect on the early training of surgeons, it is not difficult to understand how we may develop with an improper attitude toward living tissue.

The student's first introduction to the manual exploration of human tissue is in the dissecting room. It is unnecessary to remark that here delicacy of touch is not regarded as an essential quality of good technique. The next step in his training is a course in operative technique on the cadaver and later a course in dog surgery. By the time these courses have been completed, whatever instinctive reverence the student may have possessed for living, human cells has disappeared. He begins operating as an assistant on unconscious patients whose tissues become the recipient of the same kind of manipulation as used in the dissecting room or dog surgery.

I have repeatedly observed internes, while assisting them in hernia and other operative procedures, show a disregard for the rules of gentle manipulation that I feel sure was an acquired and not a natural trait. With an alert human being under the knife, the tissues involved take on something of the significance of conscious existence and it would, in my judgment, add greatly to the value of surgical training if the student did his first operative work under local anesthesia.

TECHNIQUE.—The technique of local anesthesia, while not difficult, requires close attention to detail. Novocain, for reasons already given, is the drug to be used. When a considerable field is to be infiltrated .05 percent solution is the proper strength. As much as 250 c.c. or 300 c.c. of such a solution can be used without danger. In minor operations, such as amputation of fingers and toes, 1 percent solution is advisable. It should be made with physiological salt solution and boiled. Two to three minims of 1-1000 adrenalin solution should be added to each ounce of novocain solution after it has cooled. If the adrenalin be a synthetic preparation, it can be boiled with novocain. A fresh solution should be made for each operation and for this reason tablets containing novocain and synthetic adrenalin are the most convenient for daily use. A syringe holding 5 or 10 c.c. with a locking device to prevent the needle from slipping is necessary for smooth injection. Due to the increasing use of local anesthesia, a good many devices for expediting the injections are appearing on the market. It remains to be seen how practical they will prove in practical use.

The local anesthetist should familiarize himself with sensory nerve distribution. His entire attention at this stage of the operation should be focused on injecting the novocain into those tissues which carry the sensory nerves supplying the field of operation. The skin and fascia are the planes that contain most of the sensory nerves. Fat and muscle are relatively insensitive.

The solution can be injected directly into the tissues to be operated upon, the so-called infiltration anesthesia, or the line of incision circumscribed, thereby blocking all sensory nerves entering the field of operation—the so-called circumduction or conduction anesthesia. Both have their distinct indications. I prefer infiltration anesthesia in all abdominal work and non-inflammatory superficial tumors, while conduction anesthesia is essential in dealing with inflammatory skin lesions and the amputation of toes and fingers.

If one uses the method of infiltration, the operation may proceed immediately following the injection, while if the conductive method be employed, a certain length of time must be granted for complete anesthesia.

There is a marked alteration in the appearance of the tissues following the injection of larger quantities of the solution. They appear edematous or watery and usually bloodless as a result of the adrenalin. It requires some experience to recognize tissues readily in a field so altered.

An ample margin beyond the immediate limits of the operative field should be anesthetized, as it is very disconcerting to the patient to have a snip of the scissors or artery clamp catch a sensitive nerve. A misstep of this kind on the part of an operator will very quickly demoralize the courage of a patient. One can usually sense the nervous reactions of his patients and, as a rule, they are at light trigger tension.

It seems to me that there is an excellent field for the general anesthetist to develop in mastering the technique of local anesthesia. There is every reason why this should be done by a trained expert. Its technical possibilities are susceptible of quite as much development as are those of general narcosis, indeed, I think more so. If an expert were available, I feel sure it would greatly increase the use of local anesthesia.

In conclusion, local anesthesia should not be regarded as a rival of general anesthesia, but as a supplement to it. Some form of general narcosis remains the anesthetic of choice in the great majority of major surgical procedures. For myself, I now regard novocain the anesthetic of choice in all uncomplicated hernia, including umbilical, ventral, inguinal and femoral; all minor operations on the extremities, such as amputation of fingers and toes; excisions of all superficial growths involving skin and subcutaneous tissues and resection of ribs for empyema.

The benefits to be derived by the patient from local anesthesia are not confined to saving him from the ill effects of general narcosis. They arise quite as much from a better appreciation on the part of the surgeon of the psychcological factors involved in an operation both in relation to himself and the patient.

DISCUSSION

DR. A. C. ARNETT (Lafayette): We have, as Dr. Hadley mentioned, three methods of anesthesia—general, local and a combination of the two, all of which have their various adherents—some of them almost fanatical. General narcosis has been, is now and will continue to be the method most used in general surgery.

Local anesthesia, which Dr. Hadley discussed rather in detail, has its positive indications. There are certain types of cases in which, to my mind, it is very positively indicated, such as the resection of the ribs in empyema, because we do not think these cases should have a general narcosis by the inhalant method in any form.

I would like to emphasize what Dr. Hadley said regarding local anesthesia—that it gives a surgeon a training to operate under local anesthesia alone that he cannot get in any other way. It gives him a respect for tissues and many lessons are impressed upon him that he does not forget. I think every surgeon should be able to do any operation in his repertoire under local anesthesia, because it can be done successfully.

Dr. Hadley mentions the difficulty of mental preparation with a very light gas-oxygen anal- In certain cases where local anesthesia is positively indicated you can produce your mental preparation with a very light gas-oxygen analgesia and proceed with the administration of your local anesthetic, which is nothing more nor less than the method of Crile. I cannot conceive of a nephritic or cardiac condition that a little gas-oxygen would harm. The anesthetic should be preceded by the administration of some indicated narcotic, except in a very few instances.

Coming to the combination, I think the ideal agent for general narcosis is gas-oxygen, if you use a local anesthetic in connection with it, for the reason that gas-oxygen is flexible, it is quick, it is not unpleasant, and you can produce almost any degree of narcosis you wish. In adding it to your local anesthetic you can produce absolute relaxation of the belly muscles in abdominal cases. One of the drawbacks of the combination of local and general anesthesia that more or less frequently is encountered is that sometimes we are not able to work with our regular anesthetist, and to get the best results for this method you must have absolute cooperation between the surgeon and anesthetist, which means more than mere cooperation, as the anesthetist must know what the surgeon is trying to do and instinctively cooperate with him.

Dr. Hadley mentions another thing that I do not quite comprehend. That is the training of specialists in anesthesia and the administration of local anesthetics. It seems to me that the surgeon who is capable of doing an operation under local anesthesia should be capable of producing that anesthesia and should be the one to do it. I admit that if he operates case after case it might take too long, but his assistant, who is his right hand, should precede him and anesthetize the patient if he uses a local anesthetic pure and simple.

DR. FRANK H. JETT (Terre Haute): The doctor spoke about adrenalin as a local anesthetic. I used fifteen minims of adrenalin to the ounce at first, but I found I was getting

a toxic effect from the adrenalin. Now I do not use more than five minims to an ounce of solution and do not like my patient to get more than fifteen minims in an operation. To use 250 c.c. as he mentions, would be to give two drams of adrenalin solution. This is quite a large dose of adrenalin.

Another thing, I do not think you learn to use a local anesthetic as quickly as a general narcosis. It is not so simple as "to take a small needle and get a start and take a long needle and go deeper". You are expecting that patient to stay under for an hour, and if you expect that you must give an intradermal injection first; then infiltration; then you can use your deep block of the nerve. I think the nerve block in a hernia operation is very important. One drop of solution in that nerve is worth an ounce of solution scattered around in that neighborhood. It is not necessary to use a large amount, except in the hands of the beginner until he learns where to put it; but it is necessary to put it in the right place.

Older people need local anesthesia; they do not stand a general anesthetic well. There is no better indication for local anesthesia than strangulated hernia, and this should never be operated under general narcosis. Gastrojejunostomy can be done under local anesthesia. But local anesthesia cannot be used as a pick-up. Knowing your nerve supply, sharp dissection, handling tissue tenderly, never being rough or being in a hurry, and knowing what you cannot do, will make local sometimes life saving. Local anesthesia will be used more and more; there is no doubt in my mind about that.

DR. GEORGE R. DANIELS (Marion): There are two or three little things about the local anesthesia that I want to speak about and that I think important. I think it will do away with general anesthesia. In the first place, as the doctor emphasizes, you must have the confidence of your patient. You will notice a good local man is a good conversationalist. He gets the attention of the patient and keeps up a rapid fire of talk, and many times he has finished before the patient realizes he has had anything done. A small hypodermic needle is necessary, a very small one. You can puncture the skin more readily with a small needle than with a large one, and do it quicker. Then have a long needle, a good steel needle fully 2½ inches long You get through a lot of tissue, and you can direct it; it will not break, it will bend. Do not have a 5 c.c. syringe, have a 30 c.c. syringe, and have three or four of them lying around.

I am not at variance with the doctor in any way, but these are little minor details that are important in local anesthesia, and they are the very things we may overlook. The chief thing is the quick thrust of the first needle. Then you can take a long needle and go in better.

I do not know if apothesine is the same as novocain. However, you can use all the apothesine you wish, or you can use a large amount of a one-half percent solution of novocain. I would say to have at least two of these ounce syringes ready.

DR. MURRAY A. HADLEY (closing): All I wish to say is this: It is apparent that local anesthesia is not a very popular type of anesthesia, and the reason I think is to be found in the fact that our hospitals and our training, everything connected with operative procedure, has been built around a different idea. Until there is a change in that direction no one will have a great amount of pleasure operating under local anesthesia. Unquestionably the burden is transferred from the patient to the surgeon in local anesthesia, because it is harder to operate. I hope as a result of this discussion to in some ways popularize the method. I am not an extremist in this method of operating. But you can operate painlessly in a great many major operations under local anesthesia. In a certain group of cases local anesthesia is required. Another group does not require it, but you get along better with local anesthesia than with general narcosis. There are many people traveling around with hernias that should be operated, and they will be operated more quickly if they find it can be done under a local anesthetic instead of a general narcosis.

CONCUSSION OF THE BRAIN AND FRACTURE OF THE SKULL*

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CONCUSSION

A. DEFINITION.

Concussion of the brain or stunning is a clinical condition characterized by more or less disturbance or complete suspension of the functions of the brain as a result of force applied to the head, which leads to some commotion of the cerebral substance, and may or may not be associated with hemorrhage within the cranial cavity.

B. SYMPTOMS AND SIGNS.

(a) Headache.

Headache is the chief symptom of concussion of the brain. It is present sooner or later in almost every case. It may vary in character from a sharp, acute, throbbing, beating pain to a dull ache or heavy feeling about the head.

Associated with this symptom is restlessness and nervousness.

(b) Nausea.

Nausea is the next symptom of importance.

Associated with this is vomiting, which is

(*) Thesis for cum laude degree, Indiana University School of Medicine.

usually present from one to three hours after eating.

(c) Unconsciousness is a condition frequently found in profound concussion.

Associated with this is delirium.

(d) Other subsequent and frequent clinical findings are elevation or lowering of temperature, increase or decrease in pulse rate and blood pressure, choked disc, pupillary changes, temporary paralysis, death.

C.

In a series of nineteen cases of concussion admitted to the City Hospital of Indianapolis during the year 1920, the following symptoms and signs were present:

(a) Headache of some character in every case—100 percent.

(b) Restlessness and nervousness in 21 percent.

(c) Nausea present in 25 percent.

(d) Unconsciousness more or less complete in 21 percent.

(e) Delirium in 5 percent.

(f) Elevated temperature, 25 percent.
Lowering of temperature, 5 percent.
Increased pulse rate, 21 percent.
Lowering of pulse rate, 10 percent.
Involuntary micturation, 5 percent.
Death, 5 percent.

Morbidity. Questionnaires and examinations of eleven of the nineteen cases of concussion, taken six months to one and one-half years after the accident, show the following:

1. No development of new cranial nerve changes in addition to those found present a few hours after the accident.

2. All but three of the patients complain of frequent headaches, which were not present before the accident. Associated with this symptom is nervousness, present in six cases.

3. One patient does not remember very well since the accident. He feels as if he might fall after stooping. He has a quick temper, and is very impatient since the accident. He wants to stay at home and sleep. Formerly he was always out.

4. Another patient admires women now, and wants to be in their society constantly, a thing which developed since the accident.

5. Still another finds his legs very weak, and cannot use them long at a time. He is also more drowsy than before.

6. A boy, age 15, likes to go to school now. He never did before the accident. He craves oranges. His knees and ankles hurt at times. He feels as if he could not stand upon them. Although he cannot remember as well since the accident, his present school record is much better.

7. After lying down, one patient feels very dizzy when getting up.

8. A boy, age 10, is more like a child, according to his mother. He does not learn as well in school and suffers from terrible headaches.

Six of the eleven cases heard from are unimpaired in ability to work. The seventh is unable to work. The eighth is a teamster, and must keep someone with him all of the time. Since the accident, he has fallen from the wagon upon the back of one of his horses. The tenth is unable to do any kind of work. The eleventh cannot work as he used to. He is laid off from time to time and is not strong.

Much of the late evidence goes to show that some of these cases which were diagnosed as concussion may have had associated with the injury fracture of the skull.

Discussion of Morbidity. Thus we see that although the mortality is low, the morbidity is very high. Recovery from concussion may be complete and permanent, but on the contrary, the entire nature may undergo a change. Such a change, which may not be evident for weeks or months, is apt to be manifested by egotism, selfishness, censoriousness, mendacity, great irritability, outbreaks of violent rage about trivial things and forgetfulness. The forgetfulness is particularly as to recent events. There are headaches, insomnia, attacks of depression, lassitude and vertigo. Such a patient may be susceptible to alcohol, the heat of the sun, and physical or mental strain. He can do nothing requiring mental effort.

After concussion, a patient may develop hysteria, epilepsy, amnesia or actual insanity. A condition resembling Korsakow's psychosis may develop. (Confusion with gaps in memory which are filled up spontaneously by fabrications, the patient also having multiple neuritis.)

Confusional insanity or mania may arise, or a condition like hallucinatory paranoria or mental weakness which may resemble paresis.

Concussion may pervert or wipe out all memory of the causative accident, and also, strange to say, of a varying period preceding the accident. The loss of memory may be permanent, or may only be temporary. Statements made regarding an accident by one who has had concussion must be received with many grains of salt. Victims of arteriosclerosis are particularly apt to develop mental trouble or neurasthenia. Rege insists upon this.

The actual damage of concussion can be measured only by the physical and mental disturbances which follow—either immediately, with partial or complete loss of consciousness or delayed psychomotor symptoms, which may not develop for from twelve to forty-eight hours.

History of Concussion. The early thought in regard to concussion was that it was a condition produced by molecular vibrations in the nervous substance of the brain, unattended by any demonstrable injury.

Duret's observation profoundly modified surgical thought, and led to the opinion that in concussion of the brain, there is an injury to the brain itself; a rupture of cerebral vessels brought about by the advance and recession of waves of cerebral fluid. The waves flow in the direction of the force.

Keen says that there may be slight brain injuries, which can properly be called "concussion", but it is better to consider concussion as identical with laceration of the brain.

Kocher considered concussion as identical with contusion of the brain.

Von Bergman claims that there is such a condition as concussion, which may be pure concussion, or may be associated with organic damage, and even if a man dies, and is found to have an organic injury, the concussion may have caused, or at least have hastened, the fatal result.

Discussion. The word "concussion" is derived from the Latin *contuere*, meaning "to shake up". It is evident that direct force of any character applied to the head will produce a momentary displacement of the brain. Force applied to any part of the body may be transmitted to the brain and produce concussion indirectly. Therefore all brain injuries are primarily concussions.

Concussions may be simple or may be associated with many other forms of injury, *e. g.*:

(a) Scattered areas of contusion.

(b) Lacerations.

(c) Local or widespread punctate lesions of the blood vessels producing hemorrhage of the pia-arachnoid, and even of the cortex as well.

(d) A break in the continuity of the bones of the skull.

(e) Laceration of the scalp.

2. The blow gives rise to a stimulation, which is followed by a relaxation or exhaustion of the nerve cells. The higher the type of tissue, the more susceptible and responsive is it to stimuli. The more responsive to stimuli, the greater the degree of exhaustion. The brain is the highest type of body tissue. Mild exhaustion produces a desire for sleep; more severe exhaustion, headaches of varied character, while extreme exhaustion is manifested by a reversible process of unconsciousness.

The more intense the exhaustion, the deeper the unconsciousness. This condition is closely allied to shock, and according to Crile is but one form of shock.

3. Exhaustion and even unconsciousness may result without any gross anatomical lesions. If, however, vessels are ruptured, and tissue is deprived of oxygen, according to Cannon, the deoxygenized tissue takes up fluid and swells. The resulting edema may be localized or generalized. If the edema is extreme, and the cells die, liquefaction necrosis ensues. This is then a supplementary condition, which may be associated with concussion.

4. The presence of large ruptured vessels in the meninges, or a break in the continuity of the bones of the skull, but adds to the gravity of the injury.

FRACTURE

Fracture of Skull. A fracture of the skull is a break in the continuity of the bones which constitute that structure.

The total number admitted to the City Hospital during the year 1920 was twenty-five. The total number of deaths was fifteen, or 60 percent.

Eight of the fifteen cases (46.6 percent) resulting in death were moribund upon admission to the hospital. Four of these cases died in the admitting room a few minutes after entering. One case died in six hours; another in fourteen hours.

Two of the moribund cases were operated upon. In one case pieces of bone were removed from the compound fracture and the bone shelf elevated. This case died in five hours. The other case was operated upon six hours after entrance and decompression done, but the patient died in the surgery.

There were seven cases which were not moribund, but which died. Upon three of these, operations were performed. One case in fair condition was given an anesthetic a few hours after admission and died before the operation was started. Death was probably due to the ether, which increased the already existing exhaustion. A decompression was done upon a second immediately upon entrance, who had a compound depressed fracture of the vault. Pieces of bone were removed, and the wound closed. The patient died in twenty hours.

A third case was given an anesthetic upon admission. The wound was extended and revealed a fissure fracture through the vault. Blood was oozing through the fracture. The wound was cleaned and closed with drainage. The patient died in 46½ hours.

Of the remaining four cases, who were not moribund, upon which no operation was performed, but who died,

One lived twenty-four hours;

One lived twenty-five hours;

One lived twenty six hours;

One lived four days.

Number of decompressions done, 2.

Ten, or 40 percent, of the cases which were diagnosed as fracture of the skull lived. The x-ray disclosed fracture in six, or 60 percent. Four of these were large linear fractures through the vault.

Case No. 1. A man, aged twenty-one, had a wide linear fracture through the parietal bone, and remained in the hospital ten days.

Case No. 2. A boy, aged six, had a wide linear fracture of the vault, extending from the frontal to the occipital bone. He remained in the hospital for twelve days.

Case No. 3. A boy, aged eleven, had a wide linear fracture through the occipital bone. He remained in the hospital fourteen days.

Case No. 4. A man, aged thirty-five, had a wide linear fracture in the lower occipital bone, extending forward into the base (middle fosse) and involving the temporal bone. This patient remained in the hosiptal thirty days.

Case No. 5. A man, aged twenty-six, showed from an x-ray a punctuate fracture over the left eye, with displacement inward of a few bony fragments. An operation was performed, and the fragments removed. The patient remained in the hospital twelve days.

Case No. 6. A man, aged thirty-four, had a linear fracture extending from the frontal region two inches above the left orbit on a horizontal plane, to the left occipital region. Decompression was done. The patient remained in the hospital thirty-four days.

In the remaining cases, the x-ray showed no perceptible fracture, the diagnosis being clinical.

Case No. 7. This case was a woman; age not given. Clinical diagnosis of fracture of the base. Temperature slightly elevated for a few days. There were early signs of increased intercranial pressure. There was no definite evidence of fracture—diagnosis questionable. The patient signed her own release in ten days.

Case No. 8. A man, aged forty, was struck by a street car. On admission, he was found unconscious and vomiting. On the following day—T. 98, P. 50, R. 14. On the following two days, the patient had a slightly elevated temperature, 99 to 100. Pulse 60, then 70 Paralysis of the left arm existed, which persisted. He left the hospital in thirty-one days.

Case No. 9. A boy, aged seventeen, was in a motorcycle accident. When admitted he was unconscious. No abrasions were found about the head. The patient was bleeding from the nostrils and ears. No paralysis; pulse strong and regular. Cheyne Stokes respiration absent.

The patient gradually improved, until the eleventh day, at which time he developed a large mass over the right mastoid region. A mastoidectomy and decompression revealed practically nothing. An incision of the mass later revealed a large pocket of pus (staphylococcus), communicating with the external auditory meatus. Later pockets of pus developed in other parts of the body, but were incised. The patient improved and left the hospital in thirty-two days practically well, except for a slight mental aberration.

Case No. 10. A man, aged twenty-six—no history of the injury. The patient remained unconscious for a number of days, but no physical signs of any importance could be found The patient was nauseated and vomited. The spinal fluid on the fourth day revealed slight intracranial pressure. The eye grounds were negative.

The patient gradually regained consciousness, but remembered no accident. He remained in the hospital thirty-four days.

Morbidity of Patients Having Fracture of Skull. Questionnaires and examinations of six of the patients mentioned above as having fractures of the skull who lived show from six months to one and one-half years later the following:

1. One patient, who had a punctuate depressed puncture of the skull, has been very forgetful since the accident. Although the patient is more nervous, his working capacity is good.

2. Two patients who had large linear fractures of the vault, upon which no decompression was done, complain of headaches at times, together with dizziness and swimming in the head. These two are, however, in as good a physical and mental condition as before the accident.

3. Another has never been entirely rational. He cannot read or write. He sees large objects before his eyes, and has frequent attacks of severe headaches.

4. One patient, whenever he is under any stress, especially mental strain or suspense, becomes very nervous and has a dull aching pain in his head difficult to locate or describe. At times he is apt to go to pieces, and finds self control difficult.

Discussion. In fracture of the skull, mortality and morbidity are both high. Fractures of the base are apt to be associated with paralysis of the cranial nerves. The palsy indicates the site of fracture. In fractures of the anterior fossa, the olfactory nerve may suffer. In fractures of the middle fossa, the facial nerve most often suffers. The eighth is sometimes injured. Other nerves which may suffer alone or in combination in fracture of the base are the abducens, the motor oculi communis, the trigeminus, the pneumogastric, the optic, the spinal accessory, the hypoglossal and the gloss-pharyngeal. Optic neuritis often arises after the first week. Added to the above may be all the conditions associated with concussion.

Harte (Annals of Surgery, October, 1901) has collected forty-six positive cases of fracture of the base of the skull from records of the Pennsylvania Hospital—35.5 percent recovered.

Ranschoff collected 190 cases of fracture of the base of the skull. The mortality was 65 percent. Over one-half of the fatalities were within twelve hours. Only 15 percent died after the second day. Of 98 cases with profound coma and respiratory disturbance, 90 percent died. (Annals of Surgery, July, 1910.)

According to Hartley, in cases treated expectantly, the mortality is 90 percent; in cases treated by operation, it is less than 35 percent. (American Journal of Surgery, December, 1919.)

History shows that 2 percent of all fractures are skull fractures.

1. Simple linear fractures of the vault of the skull without symptoms of brain compression are attempts of nature to produce natural decompressions, and require no surgical intervention. If compression symptoms become present, they must be taken care of accordingly.

2. Simple depressed fractures of the skull, with or without symptoms of brain compression or irritation, should be treated by elevation.

3. Compound fractures of the skull should be treated as compound fractures of other bones.

Fractures of the Base. Fractures of the base are much more common than is commonly supposed. The x-ray will not always disclose fractures through the small bones of the base. Therefore a diagnosis of fracture here is very difficult without the presence of any localizing symptoms or signs.

Fractures of the base are more common through the middle fossa, but are frequently associated with a fracture through the anterior fossa. The fractures through the posterior fossa are almost always fatal. A severe concussion is necessary to break this bone, and besides, it lies very close to the medullary centers. Fractures through the anterior and middle fossa are prone to be compound on account of their proximity to the nose, mouth, ears and pharynx. Complications frequently follow, such as:

1. Meningitis.
2. Brain abscess.
3. Deep cellulitis and abscess of the deep facia of the neck.
4. Metastatic abscess and septicemia.

THE SIGNIFICANCE OF SYMPTOMS AND SIGNS

Signs.

The first procedure is to determine the amount of intracranial pressure. This pressure is always dangerous, but only fatal when it breaks down the vagus and vascomotor mechanisms.

The Opthalmoscope.

A moderate degree of intracranial pressure may be revealed by slight dilation of the retinal veins.

The signs of a still increasing intracranial pressure beyond a dilation of the retinal veins are:

1. An edematous blurring and obscuration of the nasal margin of the optic disc.
2. A similar haziness of the nasal half.
3. Finally a blurring of the temporal half, resulting in the total obscuration of the optic disc.

These are *early signs* of increasing intracranial pressure.

The term "receding papillitis" is applied by oculists to denote the retinal conditions associated with decreasing intracranial pressure.

Pulse.

The pulse rate following the accident is frequently over 110 until the shock gradually disappears. A pulse of below 60 is a sign of break in the mechanism of the vasomotor system, and is a *late sign* of increased intracranial pressure.

Respiration.

The respiration, like the pulse rate, may be affected by shock and exceed 30. If the intracranial pressure increases, and the number decreases to the Cheyne-Stokes type of breathing, the prognosis is very grave.

Blood Pressure.

A high blood pressure is a *very late sign* of increased intracranial pressure. Its presence signifies an attempt of the vasomotor mechanism to force blood into the intracranial chambers, and thus into the medulla by overcoming the already existing increased intracranial pressure.

Paralysis may localize the sites of fracture of the base or extradual hemorrhage.

Lumbar Puncture.

Spinal puncture or rachicentisis is dangerous in cases of shock, if large amounts of fluid are removed. A few drops is all that is necessary for diagnostic purposes. If the fluid is clear and under pressure, frequent rachicentisis of not more than 5 c.c. are safe.

Spinal punctures are good to relieve headache, especially in fracture of the base. Spinal puncture will not relieve pressure due to localized areas of edema.

THE MECHANISM OF COMPRESSION ACCORDING TO KOCHER

1. Increased intracranial pressure first expels the excess cerebro-spinal fluid, and since brain tissue is noncompressible, it then compresses the local blood vessels so that the amount of intracranial blood is slightly lessened; since the blood in the cerebral veins is under a very low pressure, less blood will flow through them, and a slight anemia is produced. If the cerebral pressure is increased, the blood in the retinal veins is held back and a venous stasis is produced, its symptoms being headache, drowsiness and possibly stupor. The pulse, respiration and blood pressure are not affected. The retinal veins are usually much dilated.

2. Kocher's Second Stage of Compression.

If the intracranial pressure still rises, it tends to approximate the pressure in the capillaries, and so a partial anemia results. If this anemia

is local, the results are impairment of function of that area. If it is present in the medulla, a slow pulse of 60 or below will be present due to stimulation of the vagus nucleus, and a slight rise in the general arterial blood pressure, due to the stimulation of the vasomotor center causing not only a constriction of the peripheral blood vessels themselves, but especially of the vessels of the splanchnic field.

The anemia then becomes more marked. Headache is more severe, associated with restlessness and even delirium—a definite cyanosis appears. These definite, though moderate, signs of high intracranial pressure form Kocher's second state of compression clinically.

An ophthalmoscopic examination reveals large dilated retinal veins, with or without edema of the discs.

This is the best time to operate in order to relieve intracranial pressure, before the signs of medullary compression have occurred.

3. Kocher's third stage of compression clinically consists of the major bulbar signs of compression. As intracranial pressure continues to rise, it produces a greater anemia of the medulla, so that the intracranial pressure at times may equal the capillary pressure of the medulla. If it were not for the regulatory mechanism of the circulation in the medulla, such an occurrence would result in the immediate and permanent cessation of cardiac and pulmonary activity, and, therefore, the death of the patient. Fortunately, however, as the anemia becomes greater, this very absence of blood so stimulates its vasomotor center that the general arterial blood pressure is raised, more blood is forced into the medulla, and in this manner the partial anemia is overcome, at least temporarily.

Clinically, the picture is most striking, as the intracranial pressure increases until it tends to prevent the normal flow of blood into the medulla; the resulting partial anemia so stimulates the vagus center that the heart rate gradually becomes lowered to 50 and below, and the pulse to a full bounding character; the respiration becomes less and less frequent until a period of apnea or non-breathing results, due to the anemia of the respiratory center of the medulla.

The patient may not breathe for forty seconds or more. During the earlier part of this period of "down wave" the blood pressure falls slightly, the patient gradually becomes more and more stuporous, the pupils slowly dilate, and the reflexes are abolished—the results of a definite anemia of the medulla. Then, as this prolongation of the medullary anemia stimulates the vasomotor center to renewed activity, the general blood pressure is gradually raised to overcome the intracranial pressure until the blood is forced into the medulla, the heart rate increases, and then the patient begins to breathe again, as a result of the respiratory center being resupplied with blood.

During this period of "up-wave", the cyanosis is extreme, the pupils contract, and the patient may groan, become restless and even conscious. The reflexes return, and the ophthalmoscopic examination reveals double papelledema or "choked discs", thus the intracranial pressure is so high that the resulting anemia produces an edema of the optic nerve discs, so that their margins and entire discs themselves are obscured, the retinal veins are dilated, and at times buried in the edematous retina. Even the other extracranial veins of the scalp and particularly of the upper eye-lids are dilated.

As the medulla becomes supplied with blood again following this period of "up-wave", the stimulation of its vasomotor center is lessened so that gradually the general arterial blood pressure diminishes until the symptoms and signs of the "down-wave" become more and more marked; then the "up-wave" begins again, as outlined above, and this periodicity of symptoms and signs depending upon the rise and fall of general blood pressure, causing the Cheyne-Stokes type of respiration (Fraube Herring waves) occurs again and again. This condition may continue for hours.

4. *Kocher's Fourth Stage of Compression.* Unless the intracranial pressure is now quickly relieved by an operation (and even with an operation the chances of recovery at this stage of compression are slight) this regulatory mechanism of the medulla will finally become fatigued so that the vasomotor stimulation will no longer be able to raise the general arterial blood pressure above the intracranial pressure, and during the "down-waves", a permanent fall of blood pressure will occur; the respiration will no longer begin again, and the heart will continue to beat irregularly and rapidly as a separate organ, until the blood pressure gradually falls to zero, so that even the heart itself will cease beating.

This stage of respiratory paralysis, associated with rapid and irregular cardiac efforts, dilated pupils, profound coma, and complete muscular relaxation, and a permanent fall of general arterial pressure, forms Kocher's fourth stage clinically of permanent anemia of the medulla—the stage of loss of compensation or the terminal stage always resulting in the death of the patient.

TREATMENT

1. Rest and elimination of all external stimuli are the first steps.

2. Elevate the head with one pillow if hemorrhage is suspected. If hemorrhage is ruled out, and the shock is the predominating feature, lower the head and elevate the feet.

3. Gastric lavage will thoroughly relieve the stomach of its contents if patient is vomiting, and is beneficial if complicated with alcoholism.

4. Small repeated hypodermic injections of morphine, 1/6 or 1/8 gr., are more useful in insuring quietness to excitable and delirious cases, but it may mask all symptoms of intracranial pre-hemorrhage and is of no value to patients in coma.

5. Drastic cathartics are contra-indicated in shock, and when the patient is unconscious, daily soap suds enemas are very beneficial and may lower the blood pressure 10 to 15 degrees. Vigorous catharsis may be indicated later.

6. An ice bag surrounding the head is empirical, and may in a small way lessen cerebral circulation. Its value, however, in cases of extreme oncoming edema of the brain is questionable. Lister tubes themselves could hardly compete with the extensive inflammation. However, if the patient is conscious, the ice bag is very beneficial to relieve the throbbing pain in the head.

DRUGS

1. Ergot has been recommended to produce an anemia of the cerebral vessels. In severe cases, its action would be very meager. It may be of some value in mild cases.

2. Urotrophine is recommended by S. J. Crowe in his article in *The Johns Hopkins Bullitin, April,* 1909. It is supposed to render the cerebro spinal fluid bactericidal. It is used by very few surgeons now.

3. Iodides are said to produce a plastic exudation and encourage healing.

4. For restlessness and sleeplessness without pain, bromides, veronal and luminol may be given.

In fractures through the middle and anterior fossa, efforts to prevent infection should be made. The mouth should be kept clean. If there is a rupture of the tympanum, and discharge of the bloody cerebral fluid, the ear should be guarded against infection. It is customary to irrigate the external auditory meatus with antiseptic solution, and lightly close it with sterile gauze (5000 to 2000 mercury bichloride). Cases in which this is practiced, however, seem to do no better than those in which the ears are not treated. There may or may not be infected material on the outer surface of the tympanum—usually there is. If present, it is doubtful if it can be washed away by irrigation, while irrigation may drive it through the wound of the tympanum. The important matter is that the cerebro spinal fluid leaking out through the fracture into the middle ear, and then through the ruptured tympanum, shall have free escape.

If the current is continuously outward, infection and meningitis need not be feared, but aspiration of fluid that has once passed through the tympanum, back into the middle ear again, is of great danger. This condition is brought about by changes in the position of the patient turning the head with the injured side up, and by the outer canal becoming occluded by dried discharges. *Unless irrigation is done very carefully, there are positive dangers in it, and it is possible for an occlusive plugging of ears to be a decided menace.*

When the wound which made the fracture compound has healed, and cerebral fluid ceases to flow, the greatest danger has passed, but it not uncommonly happens that infection has already passed in, and is working its way to the meninges. These patients should be kept quiet until the symptoms have all disappeared. Usually, if there has not been much hemorrhage or exudation, this is a matter of about three weeks. The fracture may be regarded as healed in four or five weeks.

The average case of traumatism sufficient to produce a profound central hemorrhage of the brain is usually accompanied with a complete loss of consciousness, and makes but few localizing signs, so that one is forced to wait, much as in the type of apoplectic seizures. If hemorrhage extends into the ventricles, tapping and drainage may be attempted.

SUMMARY

1. Any scalp wounds which are the result of direct violence should be considered a potential skull fracture until proven otherwise.

2. Patients with skull fractures do not stand a general anesthetic well.

3. Cases of fracture of the base are poor operative risks.

4. When to operate:
   a. When a diagnosis of extradural hemorrhage is made.
   b. In severe oncoming edema of the brain.
   c. In depressed or compound depressed fracture of the skull.

5. When not to operate:
   a. In cases of fissure fracture without localizing symptoms.
   b. In the presence of shock.

6. The gravity of the injury depends upon the amount of damage to the brain substance

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HYPERTROPHIC ILEOCECAL TUBERCULOSIS*

WITH REPORT OF CASE SUCCESSFULLY OPERATED ON

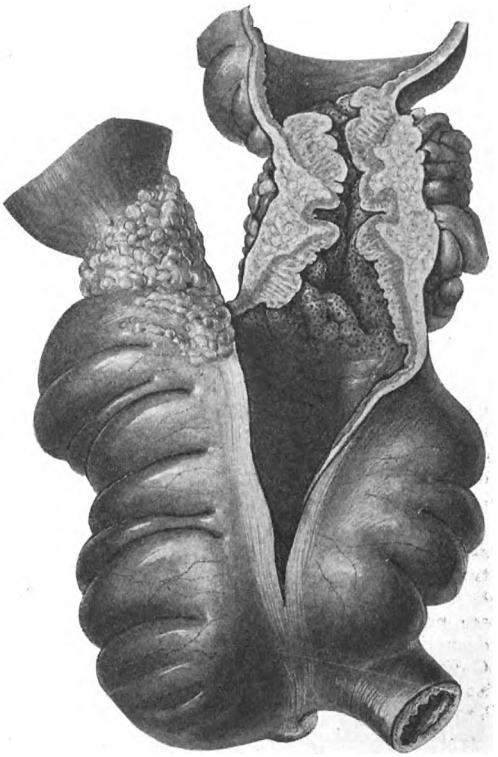
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Hypertrophic or, as it is also called, hyperplastic ileocecal tuberculosis designates an unusual but not particularly rare form of intestinal tuberculosis distinguished in addition to more or less evident characters of tuberculosis by marked connective tissue formation, great thickening of the gut wall simulating a neoplasm and narrowing of the gut lumen. The condition is usually treated of in most works on surgery and on pathology, but cases are comparatively rarely seen as judged by published reports. The case here reported is the first that has come to our personal notice. American literature contains records of about 75 cases. In European literature reports of cases are more numerous, Hartmann in 1907 analyzing 229 operations. Many cases are probably hidden in writings dealing with general abdominal surgery such as W. J. Mayo's eleven cases, and so have escaped bibliographers.

The earliest published records which we have found referring to the condition are those of Czerny, 1889, Durante, 1889, Fink, 1890, and Billroth, 1891. Undoubtedly the condition had been seen before but had been unrecognized as tuberculosis, being probably interpreted as a true neoplasm. Probably some surgeons of 25 to 30 years ago have operated on the condition with the mistaken idea that a neoplasm had been removed and the patient cured of a malignancy instead of an infectious process.

The etiology of ileocecal hypertrophic tuberculosis is the same as that of any other form of intestinal tuberculosis, the lesion occurring in the same portion of the gut as the more commonly found ulcerations. A concomitant pulmonary or other form of tuberculosis may sometimes be associated with the lesion, but in most reports it is said to be absent or else is not mentioned, implying that if present, at least it was not conspicuous. It is probable that the hypertrophic form of ileocecal tuberculosis represents a special resistance to tuberculosis on the part of the patient. The general absence or at least inconspicuousness of pulmonary or other forms of tuberculosis in these patients indicates that their resistance to tuberculosis is good. Several authors have referred to the difficulty of finding tubercle bacilli in the lesions. We demonstrated them in our own case, but did not find them abundant. In the majority of cases reported, the disease appears to be primary, but it is not unlikely that if a thorough examination had been made or could have been made, old or latent lesions might have been found elsewhere. Many of the cases operated upon have developed pulmonary or other forms of tuberculosis later.

The gross appearance of a typical example of hyperplastic ileocecal tuberculosis is so well shown in the illustration of the case here presented that no detailed description is necessary.



Drawing by Aitken
Cecal Hyperplastic Tuberculosis
(Drawing taken from fresh specimen as removed).

The neoplastic-like structure is firm and rather hard. The lumen of the gut is all but obliterated. No areas of softening are present. Not all cases are so uniformly hyperplastic. Authors report cases in which much softening and abscess formation have occurred and even perforation of the gut wall. The lymph nodes adjacent to the lesion nearly always show tubercular

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changes, and evidence of tubercular peritonitis is nearly always present. In the case here reported small tubercles were present on the cecum, and the adjacent lymph nodes were enlarged and tubercular. Bacilli were demonstrated in the latter. The most common site of the lesion is about the cecum or just distal to it. Sometimes it is so far removed as the hepatic flexure of the colon. Much less often the ileum contains the lesion. The lesion is ordinarily solitary, but Hartmann illustrates one case in which as many as three distinct lesions were present in the colon.

Microscopically the lesion is characterized by marked connective tissue increase in the submucosa, the muscularis and the serosa. There is much small round cell infiltration, an abundance of epithelioid cells, and scattered single or multiple tubercles with giant cells. In our case distinct tubercles while present were not abundant, but the fibrous tissue formation and epithelioid and round cell infiltration were marked. The mucosa is not often affected. In our case it was uninvolved. Scattered tubercles or groups of them are of frequent occurrence in the serosa and adjacent portions of the gut. In our case many small tubercles were found beneath the serosa of the cecum. These do not appear in the illustration. The lymph nodes in the drainage area of the lesion are hypertrophied and contain tubercles. The lymph nodes in our case showed tuberculous lesions but without evident caseation.

Hypertrophic ileocecal tuberculosis occurs with about equal frequency in the two sexes. Of 217 cases tabulated by Hartmann 105 were males and 112 females. Of 81 cases listed by Crowder 39 were males and 42 females. The slightly greater incidence of females is probably associated with the slightly greater incidence of females in the average population.

The most frequent age incidence for hyperplastic ileocecal tuberculosis is between 21 and 40, about 62.5 percent occurring during these two decades. No cases are reported during the first decade. About 12.5 percent occur in the second decade and the remaining 25 percent occurring in the fourth, fifth, and later decades. Gage and Hunt's patient of 71 years, male, appears to be one of the oldest reported.

The clinical diagnosis of hyperplastic ileocecal tuberculosis appears to be difficult. In reports of cases the preoperative diagnosis is seldom stated. We do not recall that any author has made a definite clinical diagnosis of hyperplastic ileocecal tuberculosis. The diagnosis of appendicitis as in our own case has been made, as well as carcinoma. Hartmann in 1908 says: "An absolute *diagnosis* is usually impossible". W. J. Mayo (p. 256) says: "Eleven of the resections were for hypertrophic tuberculosis with well marked tumor, and in the majority it was difficult to differentiate them from carcinoma at the time of operation"; and (p. 260) "The hypertrophic type of tuberculosis, which gives rise to an infected tumor and cannot be differentiated from cancer except with a microscope." The usually earlier age incidence of hyperplastic ileocecal tuberculosis and a possible antecedent or concomitant tuberculosis elsewhere would appear to be the only means of differentiating clinically the condition from carcinoma of the same region. In addition to chronic forms of appendicitis it may be mistaken for diseases of the right kidney, ureter, and female organs of generation. The symptoms incident to a narrowing of the gut should be of value. Administration of a barium meal for roentgenologic examination would appear to be a dangerous procedure in a case with as much narrowing as in the one reported. An enema, used in the present case, should be without danger and prove of diagnostic value. The slight elevation of temperature reported in some cases is of little diagnostic import, but one would not expect to find it in carcinoma. The condition is so rare in comparison with diseases with which it may be readily confused that the diagnosis for the most part will probably rest with the surgeon at time of operation and with the pathologist.

The treatment of hypertrophic ileocecal tuberculosis is entirely surgical. The most favored operation is resection of the affected portions of the intestines and the mesentery associated with them and a lateral union of ileum and colon. A few operators have performed ileostomy, or ileocolonic anastomosis, with resection at a later period. In Hartmann's summary of 229 cases operated on, 137 had complete or partial resection and anastomosis at time of first operation. The average immediate mortality of the entire series was 20 percent. Many subsequent deaths occurred from pulmonary, intestinal, or peritoneal forms of tuberculosis. Hartmann, 1908, outlines the treatment as follows: "The ideal treatment consists in resection, for alone it surely does away with the tuberculous focus. Unfortunately it is not always possible, owing to the patient's general condition prohibiting a serious operation, or on account of local conditions (extensive and tough adhesions, disseminated tuberculous lesions of the peritoneum, involvement of numerous lymphatic glands, strictures widely distant one from another, etc.)". In the comparatively small number of American cases reported with sufficient detail, there was an immediate mortality of 10 percent or a little over. An additional 10 percent died subsequently of some other form of tuberculosis, occasionally dying of tuberculosis without leaving bed following the operation. The most successful series of cases is the eleven reported by W. J. Mayo with

no mortality. The later history of these patients is not stated. The case herewith reported has remained well up to the time of writing, a period of one year.

CASE REPORT. Male, 24 years, Jewish peddler, married, with three children, all living.

Complaint—Pain in right side of abdomen associated with vomiting and constipation.

Family History—Good, no tuberculosis, no cancer.

Personal History—Always been well as rule, usual diseases of childhood, works hard, only rarely sick with colds and minor ailments. Never constipated until recently.

Present Illness—April, 1920, first noticed constipation, began to have sudden cramping abdominal pains, mostly above the umbilicus and more in the midline than to either side, associated with nausea and vomiting. Says he had no fever, took cathartics without relief. At first attack consulted a physician, who diagnosed appendicitis and advised operation. Had subsequent attacks. On May 6 during one of these attacks consulted the senior author.

Physical Examination—Man of small stature, but looks strong, does not appear sick, but has a pinched, nervous expression. Says he has not lost weight. Temperature 98° F.

Oral cavity: Negative except for a few carious teeth.

Throat: Negative.

Chest: Negative.

Abdomen: Walls strong and muscular, not distended in one part more than in another. A hard mass with rigidity of the muscles and moderate but not excessive tenderness about 2.5 inches to right of umbilicus. Mass was not movable and could not be palpated by finger in rectum. No tenderness, no other masses in other parts of abdomen.

Diagnosis—Appendiceal abscess.

Operation and Findings—May 6, 1920, through an extended incision, a mass of about the size of a lemon, with the omentum about it was revealed. It was very hard but was easily moved about with the colon. It was located about 2 inches above the ileocecal valve. There was no pathological involvement of the surrounding tissues except two enlarged lymph nodes about the size of a filbert in the omentum near the attachment by adhesions to the mass. Except for these few adhesions of the omentum about the mass there were no adhesions in the abdomen. The appendix was normal. Having no permission from the patient or family to remove more than the appendix, this organ was removed and the abdomen closed. The mass was diagnosed as malignancy of the colon. The patient made an uneventful recovery. Permission was later obtained to do a resection of the mass. On June 15, 1920, a second operation was done. Distal portion of ileum, cecum and proximal portion of colon were excised and the ileum united with the colon by lateral anastomosis. From this second operation the patient made an uneventful recovery and at time of writing, one year later, is in good health.

Laboratory Findings—June 9, 1920. Wassermann reaction negative with plain and cholesterolized antigens. Roentgenologic examination of the colon by barium enema shows descending portion below splenic flexure partially filled, probably due to gas accumulation, transverse portion completely filled, and with normal haustration. At the junction of transverse portion with hepatic flexure there is an apparent obstruction and no filling of the first portion.

Macroscopic Findings of Removed Mass—Specimen consists of 75 mm. of normal ileum, a nearly normal cecum (on parts of it are small, 1 to 3 or 4 mm. slightly elevated tubercle-like bodies and it shows a recent appendectomy scar with suture still in place) and 300 mm. of colon above the ileocecal valve. The greater portion of the colon is normal in appearance except that 100 mm. above the valve there is a marked constriction, 40 mm. in length. The lumen of the constricted portion is from 2 to 5 mm. in diameter, the thickness of the gut wall is firm and apparently infiltrated with a firm whitish growth, streaked with reddish. A few small, scarcely enlarged lymph nodes are loosely attached to the colon in the vicinity of the constriction. (See illustration.)

Microscopic Findings of Removed Mass—The mucosa shows no essential pathologic changes. The lymphoid tissue of the submucosa contains a few characteristic tubercles. The outer portion of the submucosa and the part corresponding to the inner muscular fibers shows much well developed fibrous tissue in bands running in various directions and enclosing more or less circular masses of lymphoid cells, or else small collections of tubercles. The outer muscle fibers are invaded by a few lymphocytes and a few tubercles. The serosa shows considerable fibrous tissue and a few tubercles. Sections of the lymph nodes associated with the colon near the stricture contain many tubercles. Sections of the gut, and of the lymph nodes stained by Spengler's method show a few acid-fast bacilli in the lymph nodes and a few in the tubercles of the lesion of the gut.

Summary—Hypertrophic ileocecal tuberculosis is a well defined pathologic entity, characterized by tubercular tissue having marked connective tissue increase, attacking the gut usually about the cecum or just beyond, or the ileum near the cecum, as a single lesion, rarely more than one, causing marked narrowing of the lumen and having a strong macroscopic resemblance to a neoplasm Clinically it is recognized with difficulty, a positive diagnosis usually being made by microscopic examination only. The

treatment is surgical with resection of the diseased portion of the gut and lateral anastomosis of the severed portions. The immediate postoperative mortality is about 10 percent; while probably an additional 10 per cent die of some acute form of tuberculosis. A typical case with operation and recovery is reported.

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DISCUSSION

DR. J. H. EBERWEIN (Indianapolis): This condition attracted little attention until twenty-five years ago, although a localized tubercular deposit causing thickening of the coats of the cecum had been pointed out as long ago as 1849. Czerny of Germany and Durante of Italy made excisions of tubercular ceca some thirty years ago, but the real interest in the condition began in 1891 when Billroth in Vienna and Hartmann and Pillet in Paris announced that what had often passed as cancer of the cecum was really tuberculosis, capable of excision with prospect of permanent relief.

Most writers consider two varieties of cecal tuberculosis—the ulcerocaseous and the hypertrophic. Demonlin at Paris in 1905 pointed out the existence of an ulcerative form, a hypertrophic form and an enteroperitoneal form. As Hartmann says, the whole of the ileocecal region is lost in the ulcerative form, interspersed

with caseous matter and even purulent tuberculous cavities communicating sometimes with the intestinal tract. This condition is relieved by exclusion through anastomosis. The hypertrophic form is the so-caled tubercular tumor of the cecum. It is usually more or less mobile in the iliac fossa, and is often included in a fibro-adipose mass which attains a thickness of 3 or 4 cm. It is of much interest because so often mistaken for carcinoma, and because it is so amenable to surgical treatment.

In the etiology most writers state the probability of its being primary, but I noticed in the case reports that the physical examination shows lungs normal, except some slight dullness, a few rales or rubs at the base, etc. It is my opinion that later we will discover it is nearly always secondary to pulmonary tuberculosis.

Pathology:—The condition usually involves the cecum, sometimes a part of the ileum, but may involve any other part of the colon. There may be one tumor or more. It has been necessary to remove the whole colon to get a cure. In Dr. Baker's report the condition seemed to involve more the serosa and subsera, and the mucosa was not involved. Vegetation and polypoid masses may form in the lumen of the cecum. One assumption is that the tubercle bacilli pass through the intact wall of the intestine, usually the ileum, without leaving any trace of their passage, and enter the mesenteric and retroperitoneal lymph nodes, giving rise to symptoms of tuberculosis of these structures.

Symptomatology:—In the incipient stage there are indefinite gastro-intestinal symptoms accompanied by pain and tenderness in the lower abdominal quadrant. In the second stage we find a readily palpable and movable cecal tumor with symptoms of a low grade localized abdominal inflammation. In these two stages fever may or may not be present. In the third stage symptoms of obstruction dominate. An x-ray examination should always be made, excepting where acute obstructive symptoms are present.

The treatment is both medical and surgical. These cases should be treated medically both before and after operation and given practically the same medical treatment as other forms of tuberculosis. Heliotherapy should be used both before and after operation. There are some differences of opinion as to surgical treatment. Although most men prefer excision and anastomosis, as was done by Dr. Baker, some prefer ileocolostomy with or without intestinal exclusion in the majority of cases; first, because the mortality is greater in excision than in simple ileocolostomy, and second because the latter will cure most cases. Intestinal exclusion is combined with the ileocolostomy where the disease involves a great deal of the gut wall. If the disease is still more extensive, ileosigmoidostomy can be performed as advocated by Lane.

DR. A. S. JAEGER (Indianapolis): As the doctor says, many of these cases are diagnosed as chronic appendicitis with adhesions, and this paper will make us remember that at times it is best not to make absolute preoperative diagnosis, because we have all had the experience of sometimes not finding things in the belly as they seem to be from the outside.

I believe Dr. Baker has been taught a valuable lesson in that I do not believe in future he will operate a case with permission simply to do one thing. It has been many years since I have operated anyone unless I have had consent to do that which I found best and necessary to do. If Dr. Baker had operated this case with consent to do whatever he could do, he would not have had to operate the second time. So it behooves us to get the practical points from his paper as well as the scientific points.

DR. JOHN W. SLUSS (Indianapolis): I have seen three cases of tuberculosis of the cecum, all occurring in my service at the City Hospital. They were all in foreign-born individuals, and I had a very strong impression from my study of these cases that diet had a great deal to do with the development of the condition, because these individuals whom I saw had lived upon a very indifferent sort of diet, and I thought their mode of life together with their diet had much to do with the origin of the disease. In other words, that the cecum acted as a sort of trap, a sort of cesspool, which gave the tubercle a chance to develop and take hold upon the mucosa of the cecum.

My opinion, further, is that these cases were nearly all primary in the cecum. That is, that hypertrophic tuberculosis of the cecum is merely an end process, and that the trouble begins as a simple ulceration of the cecum; that it is not an active process; that it develops very slowly, and the attempt of nature to circumscribe it and wall it off results in the formation of a great amount of scar tissue, so that the connective tissue formation is merely one of the end results of the ulcerative process. The surprising thing in these cases I have seen—I have operated only one myself—was the motility of the tumor, which has been mentioned by the essayist. One would expect that with a process which has manifestly continued so long and which involves such an extensive part of the abdomen, there would be extensive adhesions; but usually the tumor is quite motile and there is no difficulty in the excision.

I want to emphasize the fact that in my opinion the trouble is local in its origin, and that there is not necessarily a primary focus in some other part of the body.

DR. B. VAN SWERINGEN (Fort Wayne): I want to refer to a case in the hospital now in which the diagnosis before operation was cecal

tuberculosis. The patient was a young girl about nineteen years of age who had lost considerably in weight recently; within the last few months she had lost twenty pounds. The symptoms were those of general weakness, with the exception of a diarrhea which had persisted for two months, following a sojourn at a little lake in the northern part of the state, which it was thought was due to improper food. However, the apparent anemia, the loss of weight, and a temperature of 101 to 101.5 led us to suspect tuberculosis immediately. There was no cough, but on examination of the chest there were a few rales on one side and some impairment of the percussion note with enough harshness of the respiratory murmur to make a chest expert suspect very strongly that there was a pulmonary lesion. However, examination of the little sputum we were able to collect was negative. While she was under observation she passed a little blood in the urine a time or two. Examination of a centrifugalized specimen revealed acid fast bacilli in the urine. There was a mass in the right side of the abdomen corresponding to the mass often felt in appendiceal disease, especially acute appendicitis with adhesions. She was operated a few days ago and the tuberculous infection was found to be in the ileum, not the cecum. The appendix was not diseased, but the process extended up at least six inches on the ileum and away from the appendix, not on the side of the large bowel at all. There was no involvement of the wall of the cecum.

I simply mention this to show that "tuberculosis of the cecum" may be found in the small gut.

DR. GOETHE LINK (Indianapolis): It has been my fortune to meet with two cases of tuberculosis of the cecum, a condition which looks very much like cancer. We find, however, that in tuberculosis of the cecum there is usually no increase in peritoneal fluid, while in carcinoma there is always a great increase in peritoneal fluid. That will help us in making a diagnosis, for it must be made on the spot and usually from the gross appearance. In my cases there was not sufficient obstruction to demand resection and I removed the appendix and closed the abdomen. The patients were then sent to a southern climate and treated as if they were suffernig from pulmonary tuberculosis, and both recovered.

In view of the large mortality percentage from the surgical treatment of this condition, it is my opinion that unless the gut is so damaged as to cause obstruction, this condition should be treated medically and not surgically.

DR. W. H. WILLIAMS (Lebanon): A short time ago a young man came under my observation with an abdominal condition for which he had been previously operated. He was thirty-three years of age. About five months before I saw him he had been operated under another service for appendicitis. While in the hospital following this operation he seemed to do very well, but after going home his old symptoms returned—pain in the umbilical region with more or less disturbance of digestion and a general feeling of illness. No temperature present, no abdominal fluid, and but slight loss of weight. Finally he came into our service and upon examination I found an elongated mass in the right side extending well up to the edge of the liver. An examination of the lungs did not reveal any pulmonary condition, so we decided that we would make an exploratory incision and see whether or not that was a tubercular mass. That was done. We found tubercular involvement of the cecum extending almost to the hepatic flexure, and extending out on the ileum for a distance of twelve inches. We thought with that condition we could not make an anastomosis nor remove the cecum and that part of the ileum involved, so we simply closed the abdomen and followed with general treatment. He seemed to improve for about four weeks, had a good appetite and gained some flesh, but he soon dropped back to the same old train of symptoms, and immediately following that, pulmonary symptoms presented, and between three and four months after operation he died—a typical case of pulmonary tuberculosis.

DR. WALTER H. BAKER (closing): As has been said, the question of diagnosis from the gross specimen as the surgeon views it, with the abdomen open before him, is very difficult to differentiate from cancer. Yet the following points in my case and in the report of other cases should be considered:

The cecum is mobile, quite freely so, mass and all.

There was a lack of free fluid in the peritoneal cavity.

Localization of the disease seemed more marked than in malignancy. There may be other points brought up from a more careful and accumulative study of cases, over years of time, that will make it possible for us to make a positive diagnosis before operation. This we all hope for.

As I listened to the discussion I could not help but wonder how many cases of hyperplastic ileocecal tuberculosis had been removed for cancer and a recovery followed, and a cure charged up to the surgery of cancer. Likewise how many such growths had been left *in situ* and the death charged to malignancy. This subject therefore is well worth our most careful attention.

THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION
Devoted to the Interests of the Medical Profession of Indiana
ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.
Editor and Manager

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EDITORIALS

THE DEATH OF DR. WYNN

For the third time within the last few months the Indiana medical profession loses one of its most prominent members through the tragic death of Dr. Frank B. Wynn, of Indianapolis, which occurred in the mountains of Glacier Park, Montana, on July 27. No Indiana physician stood higher in the esteem of the medical profession and his fellow citizens than Dr. Wynn, and his loss will be felt by innumerable activities which received his attention. His name was identified with many civic movements, though at no time did he lose sight of professional affairs as was evidenced by his connection with medical societies every one of which signally honored him, and with the Indiana University School of Medicine in which he long occupied a prominent position as teacher. It was his love of nature and interest in outdoor recreations that led him many years ago to join the American Society of Mountain Climbers, and it was his indulgence in the pastime of that society which finally led to his tragic death. One of his early achievements which brought him distinction in the medical world was the creation of the Scientific Exhibit of the Indiana State Medical Association. It was the general excellence of this work which finally led the American Medical Association to establish as a permanent feature of annual sessions a Scientific Exhibit over which for many years Dr. Wynn presided with signal honor to himself and great benefit to the physicians of the country. He had been honored by numerous societies, which included the presidency of the Indiana State Medical Association, the Indianapolis Medical Society, the Mississippi Valley Medical Association, and first vice-presidency of the American Medical Association. He also had served as president of the American Mountain Climbing Club, the Indiana Centennial Commission, and numerous other civic, professional and social organizations. He was the author of many valuable scientific papers and at the time of his death had just completed a series of articles on "The Physician" which had been running regularly in this Journal throughout the past two years. In fact it was immediately prior to his departure for the West where he met his tragic death that he completed arrangements for the publication in book form of this series of articles. As a practitioner of medicine he was singularly successful. For many years he limited his practice to internal medicine and enjoyed a large consultation practice. His patients learned to love him not only because of his scientific ability but because of his very lovable and sympathetic disposition, and medical men everywhere held him in the highest esteem. His untimely death at sixty-two years of age creates a loss which it is hard to fill, and as we had occasion to say at the time of the tragic death of another prominent physician, "the medical profession has lost one of its truly great men".

HAY FEVER

The vast army of hay fever victims has looked to the medical profession for years to bring them some relief, and there is gradually accumulating evidence that their hope has not been without foundation. The road to their improvement was opened by studies in allergy which showed these conditions to be expression of human hypersensitiveness. Their treatment by gradual immunization naturally followed forthwith, and its results while far from perfect augur well for ultimate success.

The use of the various pollen extracts, polyvalent or univalent, is now more than ten years old and the number of cases treated furnish statistics worthy of consideration. In the reports of 8,000 cases, collected from various sources, approximately 25 percent are said to be entirely relieved, 50 percent made comfortable, and the remaining 25 percent not materially relieved if at all. As a general procedure timothy pollen may be used for the "spring" type and ragweed for the "fall". Many prefer the polyvalent extracts in both cases, but the fact is that either because of their more common occurrence or because of their greater activity the two mentioned cause the vast majority of hay fever cases.

Immunization should be begun early, the injections being given at five-day intervals and so timed that the maximum dose is reached shortly before the individual's "season" begins and then continued through the season at ten day intervals. Reactions to the extract are rarely of any consequence and may be controlled readily by epinephrin when necessary.

Failure to immunize the first year should not discourage one, for it is frequently possible to obtain the desired result by perseverance throughout the second or even third year. On the other hand, permanent immunization should never be promised the hay fever victim, for relapse in apparently immunized patients frequently occurs. Hay fever patients frequently

"outgrow" the disease, *i. e.*, immunize themselves, and it is best to continue the process of immunization yearly until such fortunate outcome may be reasonably hoped for.

One of the early obstacles to the success of this method of treatment was the instability of pollen extracts. This, luckily, has been overcome, and extracts potent for six months are obtainable. At first glance it would seem wise to employ only freshly prepared extracts, but the published statistics show little if any difference in the results of cases treated by freshly prepared extracts and those prepared commercially.

Explanation of the resistant cases is still lacking, for many of them do not seem to differ in any respect from those most successfully treated. Greater experience in the graduation of doses, in determining the intervals between injections, and possibly greater familiarity with the wide variety of inimical substances to which the human animal may be hypersensitive, will eventually add the unsuccessfully treated to the list of those entirely relieved.

SUPPORT THE COUNCIL ON PHARMACY AND CHEMISTRY

As evidence that doctors are easily duped we cite the following incident which we know to be true:

Very recently a representative of a comparatively little-known firm, manufacturing pharmaceutical specialties, has been calling upon the Indiana doctors and leaving samples of a pharmaceutical specialty that has *not* received the approval of the Council on Pharmacy and Chemistry of the A. M. A. In fact the preparation, of unknown formula, has all the ear marks of being worthless, and like all preparations of that kind is sold at an extravagant price. The representative who is calling on the Indiana doctors does not hesitate to say that his firm has absolutely no use for the Council on Pharmacy and Chemistry of the A. M. A., and that the doctors should pay no attention to the Council's findings. As an evidence that doctors are listening to this talk, we happen to know that many are prescribing this preparation of unknown formula; and probably worthless, and the agent is boasting of this fact—all of which leads us to remark that when doctors persist in being so gullible, to say nothing of being so inconsistent in the practice of their profession, is it any wonder if the people lose confidence!

In the first place, no doctor is justified in prescribing a preparation, the character and ingredients of which are unknown to him. In the second place, even the published formula does not always tally with the real formula, proof of which has been determined many times. The Council on Pharmacy and Chemistry of the A. M. A. is a clearing house for the medical profession, and its findings are not only unbiased but thoroughly dependable. Not only should the medical profession support the Council, but it should be guided in every instance by the Council's findings. The doctor who follows the dictates of a pharmaceutical house, which ordinarily has no more interest in the medical profession than that which brings in dollars and cents, is untrue to his professional calling. When he prescribes preparations of secret formula, and the merits of which he knows nothing, he stoops to the plane of the quack. The American Medical Association has furnished a safeguard by establishing the Council on Pharmacy and Chemistry, and every doctor who prides himself upon being rational and honest in the practice of his profession ought to appreciate the efforts of the Council in affording him protection, and be guided by the findings of that body. Whenever a glib salesman offers a proprietary preparation, the first question asked should be, "Has the preparation been approved by the Council?" If the salesman or detail man admits that the preparation is not approved, then refuse to have anything to do with it. On the other hand, if the claim is made that the preparation has been approved by the Council, make sure that the man is not lying about the matter, as it is a well-known fact that some detail men claim that certain preparations have passed the Council when such is not the case.

"LE CADUCEE"

London's medical profession has been perturbed by an English version of the remarkable play to which Baron Henri de Rothschild, under his pen name of André Pascal, has given the title "Le Caducee." The central figure of the play, one Dr. Armand Revard, is a fee-splitting surgeon who, of course, performs unnecessary operations for the sake of a fee. Revard, like his American prototype, craves notoriety and invites newspaper representatives to his operations. One of Revard's victims is an American woman who dies. Threatened with exposure and learning that the patient he has killed secretly loved him the charlatan commits suicide. Ethical medicine is represented in the play by two decent doctors who give voice to the high principals of our profession. The English title of the piece is "The Risk." The following illuminating comment on the French title occurred in the *London Telegraph*:

In the French version it is "Le Caducée", which requires explanation, and therefore fails to be striking or suggestive. The Caduceus is the emblem of Aesculapius, the god of all doctors, and the serpent which winds itself around the emblem typifies Prudence and Caution, while the mirror into which it looks is, of course, Truth. But there is another Caduceus which is the emblem of Mercury—a very different god, the patron of commerce and also of

those arts, not always above board or honest, which commerce brings in its train. Naturally, the identification of the two leads to some confusion among both the profession and the public at large. The devotees of Mercury worship a different ideal from that which appeals to the disciples of Aesculapius. The one set laughs at the other as out of date, the second charges the first with dishonesty.

A play which could teach the above lesson to the critic of the *Telegraph* deserves the applause and the encouragement of reputable medical men. The JOURNAL has no patience with such protests as the *British Medical Journal* made against its production. The play is not an attack upon the medical profession but it is an attack upon some of our unscrupulous members. The notoriety seeking fee-splitter is indigenous to American soil, but he flourishes in France and Great Britian as well. Baron Rothschild is a physician as is also the London producer and actor, Arthur Bourchier. These gentlemen deserve credit for having focused the attention of the public on the fact that the commercialization of medicine is of grave public concern. It is coming to the time when the wise patient will find out whether his physician is working under the caduceus of Aesculapius or under the emblem of Mercury.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

REMEMBER that the next session of the Indiana State Medical Association will be held in Muncie, on Wednesday, Thursday and Friday, September 27, 28 and 29, 1922.

THE village of Waymansville, Indiana, is without a physician since the recent departure of Dr. F. W. Kern for Cincinnati, where he entered government service. The location is a good one, and any interested doctor should communicate with Wm. Otte, Waymansville.

THE preliminary program of the Muncie Session of the Indiana State Medical Association is published in this issue of THE JOURNAL. The completed official program will appear in the September number. We hope that every member of the Association will have the official program a week before the Muncie session.

THROUGH an error on the part of our printers an insufficient number of copies of the July issue of THE JOURNAL were printed, and our files are practically depleted for that month. Therefore, if doctors who do not bind their copies to keep permanently will send in their July copies to this office, the courtesy will be greatly appreciated and we shall be pleased to furnish postage.

WE have received a cynical and sarcastic anonymous letter concerning the question of unethical advertising on the part of physicians which the writer says he hopes we will have the "guts" to publish. He admits mailing his letter away from home in order to avoid identification. We shall take great pleasure in publishing the letter if the writer will have the "guts" to give his name (not necessarily for publication) and not resort to "thief in the night" tactics in order to vent his feelings.

OUR readers know of a well known advertising slogan, "Good morning! Have you used P——'s Soap?" We desire to improve upon it by saying, "Good morning! Have you read the advertising in THE JOURNAL?" Remember that the busy housewife learns of bargains at the department stores by reading the advertising in the daily papers. You may or may not strike bargains by reading the advertising pages in your JOURNAL, but you certainly will profit by learning something that is of interest to you.

This is the time of year when doctors are called upon to treat sick babies. Most of the ailments are digestive troubles, principally diarrhea of the fermentative type. Our readers should remember that one of our advertisers manufactures infant diet materials and the firm is one of the very few that does not advertise to the laity but depends upon patronage which comes through the recommendation of physicians. Their products advertised in the medical journals have the approval of the Council on Pharmacy and Chemistry of the A. M. A.

THE secretary of the Vigo County Medical Society is "onto his job", and among other activities is sending out a series of letters calling attention to some of the things which are threatening the medical profession of today. One of these letters significantly points to one of the "weak spots" in our profession and

that is the apathy and lack of co-operation among medical men in upholding educational standards and preventing iniquitous legislation pertaining to medical licensure. The suggestion offered is that it is time for medical men to get together.

SINCE the publication of our editorial in the July number of THE JOURNAL on the subject of unethical advertising on the part of physicians, we have been deluged with letters concerning the matter. Practically all of the letters approve the suggestion that the notorious offenders be brought to book, though some of the correspondents, cynically inclined, complain about the lack of ethical conduct on the part of all physicians. For lack of space it would be impossible to publish all of the contributions that have been sent in, even though permission to do so has been given, but we will publish some of the letters in the September number of THE JOURNAL.

THE New York State Department of Health is doing a splendid work in educating the public concerning health and sanitation. Not only are the "Radio Health Hints", broadcasted from the radio station at Schenectady, valuable as educating the public, but the newspapers throughout the country are furnished with weekly health notes of timely interest and we notice that for the most part newspapers are taking advantage of the service. This is a step in the right direction in educating the public along right lines concerning public health matters and the example set by the State of New York could well be followed by the boards of health in other states.

THE Indiana Tuberculosis Association is doing a commendable work in spreading propaganda concerning the dangers of accepting treatment at the hands of charlatans and quacks and following anything but expert advice in the management of diseases. Recently the Association has printed a pamphlet entitled "The Chiropractor in the Supreme Court", in which attention is called to the ignorance and inconsistency of the chiropractic teaching as well as to the necessity of the State exercising a legitimate right in taking a forceful stand for the protection of health by requiring that all those who take into their hands the lives of others be placed under the same requirements for practice as doctors of medicine. This pamphlet ought to be of some service in educating the incoming legislators.

"The business men of Chicago have secured the services of an expert in rat extermination work in order to reduce the danger and financial loss incident to the presence of rats.

"The health commissioner has endorsed this movement and promised cooperation. Federal authorities claim that there are as many rats as human beings in this country."—*Boston Medical and Surgical Journal*, August, 1922.

Perhaps in time the profession of rat extermination will become quite popular and respectable. We may even hear of pied pipers of legendary fame, and if the rats are susceptible to the strains of music why not set a phonograph at work in our alleys with records giving forth suitable rat music and entrap the rodents while we sleep. Anyhow, a rat crusade in the cities and thickly populated communities is deserving of approval, for there is no question about the fact that rats disseminate disease, to say nothing of destroying property. As a suggestion we might offer the recommendation that municipalities could accomplish a good deal by offering a bounty for rats, dead or alive, and thus give the small boy a chance.

THE Indiana State Division of the American College of Surgeons will hold a meeting in Evansville December 4 and 5, in which Michigan will join, as also will the Ohio Valley Medical Association. This is the second annual meeting of the Indiana Division, and the Evansville doctors are well organized and have splendid plans under way for a good program and clinic. The executive officers are James Y. Welborn, Chairman, Evansville; E. M. Shanklin, Secretary, Hammond; H. O. Bruggeman, Councilor, Fort Wayne. Committees appointed for the annual session are as follows: Committee on Arrangements, Wm. R. Davidson, Evansville; W. S. Ehrich, Evansville; E. M. Shanklin, Hammond; Bleeker Knapp, Evansville. Committee on Entertainment, Wm. H. Field, Evansville; J. W. Phares, Evansville; L. D. Brose, Evansville; J. Rilus Eastman, Indianapolis. Program Committee, M. Ravdin, Evansville; Wm. E. McCool, Evansville; Benjamin Floyd, Evansville; M. R. Combs, Terre Haute. Committee on Hospital Arrangements, J. Y. Welborn, Evansville; A. M. Hayden, Evansville; P. C. Rietz, Evansville; M. Ravdin, Evansville.

A FEW months ago we chronicled the tragic death of President Stone of Purdue University, who lost his life in the pastime of mountain climbing in the Glacier National Park. At that time we commented upon the fact that mountain climbing is a hazardous undertaking and that it seemed a pity that prominent men, in the prime of life, so much needed in carrying on the world's great achievements, should indulge in such a pastime with the possibility of losing life. At that time we were criticized by Dr. Frank B. Wynn for having placed mountain climbing in the list of dangerous activities, and the editor of THE JOURNAL, half in jest and half in earnest,

said that if one would keep at mountain climbing long enough he would meet with a serious mishap. It is but a few months since this remark was made, and now we are recording the tragic death of the one to whom the remark was made, for it is very probable that Dr. Wynn would have been alive today had he not attempted the scaling of the highest peaks in Glacier National Park. A tragic end is open to any of us, but it is not necessary for us to court danger, and mountain climbing, in the light of the history of the sport, must be considered a hazardous undertaking.

THE chiropractors are good advertisers. They not only use newspapers and billboards but they use their advertising on blotters, paper bags, fans and other useful articles that are distributed gratis to the public. We also have noted in last month's JOURNAL that the churches are worked to the limit to further chiropractic delusion. Probably the next thing will be for our ministers to include in their prayers something like the following: "And, good Lord, in bestowing thy blessings upon the president of the United States and other high personages, please do not forget the members of the chiropractic faith who promise to deliver the world from all physical infirmities and inflictions—yea, even to the growing of hair on the bald heads of the deacons in our churches—through the medium of simple mechanical manipulations. And, O Lord, we beseech Thee to pour your richest blessings down upon the heads of these wonderful benefactors." In reality this may not be so much of a joke either, for we shall not be surprised if more than one minister is deluded into offering such a praper in the sincere belief that he is increasing the chances of the sick and the maimed to become well.

THE Committee on Arrangements for the Muncie Session of the Indiana State Medical Association desire to call the attention of the golfers of the Association to the fact that there will be a Doctors' Tournament. They boast the best 18 hole course in Indiana—in fact in the West—at the Delaware Country Club, and their announcement reads as follows:

"Golfers, Attention. How about a 78 on the best 18 hole course in Indiana? Listen! The Delaware Country Club of Muncie has just opened a wonderful new 18 hole course, one of the best in the West, and they have very kindly allowed the use of it to the visiting members of the profession who are golfers and who will be present at the State Meeting in September. We are going to have a Doctors' Tournament. It will be more than likely a handicap, so we ask that you send in your name with your best scores (*of course*) as soon as possible to Dr. Frank G. Jackson, 214 East Adams street, Muncie, Indiana, or to Dr. C. A. Leatherman, care Muncie Products Division of the General Motors Corporation, Muncie. If there are any "Old Timers" who wish to play off an old score (*or pay an old debt*), just let us know the names and arrangements will be made. *"Dub"* foursomes will be the specialty, and we may have a keg of nails for the best score."

A FEW months ago we published an article calling attention to the unfair discrimination against American physicians by the teaching body of the University of Vienna. We are in receipt of a further communication, dated June 30, as follows: "The American Medical Association of Vienna wishes to have you announce through the columns of your Journal, the restoration of friendly understandings between their organization and the teaching body of the University of Vienna. A special committee, elected by the Association, after a thorough investigation of the charges of discrimination against Americans, which were reported by members of our Association and published in our recent memorandum to your Journal, find that the men who made the accusations of discrimination were either unable or unwilling to substantiate these charges under oath. Further, the courses in question were not so-called book courses and consequently were not under the control of the A. M. A. of Vienna. It is the sentiment of this Association that the men of the teaching body of the University of Vienna have suffered by this unjust criticism. We further wish to state that through the efforts of our special committee, working with a like committee from the teaching body, sufficient numbers of book courses in English in all branches may be had at prices of from $3.00 to $5.00 per hour for the group, taking such courses."

OUR hats are off to the Vigo County Medical Society! At present a series of letters are being mailed by the Society to doctors all over the State in which attention is called to some of the problems confronting the medical profession, not the least of which is the growing menace of State Medicine. The question of keeping up the standard for medical practice also is discussed intelligently and medical men are asked to take an active part in politics with a view of preventing the chiropractors from gaining any legal recognition as qualified practitioners of medicine. The plea is made to medical men to stand for fair play and a square deal on the question of recognition of the various cults that are now imposing upon the people and representing themselves as qualified to treat the sick and disabled when we know that they are notoriously incompetent. The legislature meets next

January and it is the duty of every county medical society to follow the suggestion of the Vigo County Medical Society and have the candidates for the legislature from each county appear before the medical society of that county and tell exactly where they stand on the question of support of the present medical practice acts. In one of the letters the final rejoinder is worth remembering: "Let's get some place and be somebody. Let's fight! If we are going to permit chiropractors and such to spend their money for legislation favorable to them without a fight, why not take to some other calling where there are no battles to fight?"

THE HIGHER EDUCATION OF CHIROPRACTORS. "What is your favorite light literature? Detective stories? Mystery stories? Humor? Have you ever read the publications issued by the various species and subspecies of the chiropractic cult—for there is, as you know, a lack of unanimity among the chiropractors. One particularly choice piece of contemporary journalism is issued by a chiropractor factory in Fort Wayne, Indiana. Its July, 1922, issue makes good hot weather reading. The editor discusses a "model bill," recently drawn up by those chiropractors of Indiana who belong to a different subspecies from those represented by the publication in question. This Fort Wayne journal views the bill with disfavor. It says, with refreshing naivete:

> To begin with, there is absolutely no need of a Chiropractic licensing and examining board in Indiana today. The existing lot of Chiropractors in Indiana cannot be improved upon. You are not being persecuted or prosecuted, you are left severely and strictly alone to practice your profession without let or hindrance from any source or any group of any kind. In fact, Indiana today is the best Chiropractic state in the entire country. Chiropractic conditions are as near ideal as it is humanly possible to approach that condition.

"But the fact that Indiana is the home of the free, chiropractically speaking, is not the only objection this journal has to the proposed bill. It seems that the bill would require applicants for chiropractic examination to submit satisfactory proof of the possession of a preliminary education, equal to that of a high school. Perish the thought! As the editor says:

> How many chiropractors in Indiana today could qualify under that rule? Of all the Chiropractors in Fort Wayne, I do not happen to know of ONE that is a high school graduate. In fact, I believe that the total number in Indiana able to comply with that ruling would be less than two per cent of all the Chiropractors in the State.

"From the point of view of the owner of a chiropractic 'college' the sentiments just quoted are eminently logical. It would be entirely unfair to chiropractic schools to insist on matriculants being educated human beings. What educated human being would ever attend a chiropractic school? Of course, from the point of view of public interest—but that's another story."—*Journal of the American Medical Association, July 15 '22.*

THE country now suffers from business depression and, of course, doctors along with other business and professional men feel the effects. A little more prolongation of the existing strikes, with perhaps the addition of a few more disturbances in labor circles, and this country is going to suffer some real want in the midst of plenty. Isn't it about time to put a stop to this foolishness of permitting a handful of arrogant men to cause a nation of over one hundred million people to suffer? Laborers and employers of laborers should be compelled to adjust their differences promptly when a cessation of their activities means suffering for the public. Arbitration is the fair and honorable way of settling disputes when warring parties can not settle their troubles among themselves, and we have no sympathy with laboring men when they refuse to arbitrate and insist that their demands shall be the only ones considered, as has been the case in some recent disturbances between laborers and their employers. On the other hand we have no sympathy for the employer who insists that he has a right to treat his employees as he sees fit. In the matter of furnishing such necessities as food, fuel, light, transportation, etc., the public has some rights which must be considered, and both employer and employee should be compelled to recognize this fact. At the present time there is good reason for using "the big stick" of Roosevelt on the warring factions, and we have been greatly disappointed in President Harding in noting that he has exercised altogether too conciliatory a spirit in attempts to relieve the country of actual suffering and want occasioned by the needless strikes connected with the mining and transportation business. We are not in sympathy with the idea that mining and railroad transportation of every kind should be controlled by the government. The good Lord deliver us from government owned railroads, for we have had a taste of that and it proved disastrous, such things are bound to be with the politics which would enter into such enterprises, but we are firmly convinced that the government should not only force mining and transportation companies and their employees to submit their controversies to arbitration but compel them to abide by the results. To permit them to continue a war to the bitter end is to compel the public, most vitally concerned in the outcome, to suffer unnecessarily, and it should be prevented. Such a course of action is inconsistent and should be prevented forcibly if necessary.

THE tragic death of Dr. Frank B. Wynn, beloved member of the medical profession of the state, has brought sadness to the heart of all who knew him. That his friends and colleagues may know the circumstances attending his death, we are publishing herewith, through the courtesy of Dr. W. N. Wishard, who was with Dr. Wynn's party at Glacier Park, the statement made by Dr. H. H. Goddard of Columbus, Ohio, who was with Dr. Wynn when the tragedy occurred.

FACTS CONCERNING THE DEATH OF DR. FRANK B. WYNN

On Siyeh Mountain, Glacier National Park, Montana, Thursday, July 27, 1922.

Dr. Wynn and I left Many Glacier Hotel about ten a. m. on Wednesday, purposing to camp near the top of Piegan Pass and climb Mt. Siyeh on the morrow. We carried our sleeping bags and food on our backs. We traveled slowly and enjoyed the trip. We lunched near Morning Eagle Falls, took some pictures and ascended the Pass.

We arrived about four p. m. and made camp a few rods below the summit of the Pass. After a comfortable night we rose about daybreak and prepared breakfast. At five forty-five we started for Siyeh. We left the trail about on a level with the saddle between Cataract Mountain and the Siyeh Range. Reaching the saddle, Dr. Wynn took some pictures and we proceeded to ascend toward the visible summit. The rocks were good and we hoped to reach the high slope and also the afore mentioned summit.

Dr. Wynn was in excellent spirits and said this was just the kind of climbing he liked. We picked our way but found no difficulty and no dangerous places. Dr. Wynn was leading. He came to a point where he said, "I don't know which is the better way—to go along the rocks nearly horizontal or to climb up to the next shelf." He chose the latter. The horizontal way was entirely feasible, as I could see. I could not see the other as I was a few feet below him and to the left, but he evidently thought it better to climb up to the next shelf. He put his knee on the rock and seemed to start up. I was about to step to where he had been standing when he seemed to step back and the next instant fell headlong backwards to the shelf below—perhaps six feet down. He rolled off this and on down the mountain for quite a distance.

In my judgment he must have had a sudden physical disturbance, probably apoplexy. He could not have slipped, because there was no difficulty to cause a slip, and had he done so he would have easily recovered himself, or at the worst would have slid down feet first clutching at the rocks. He made no sign of an effort to save himself. He uttered no sound. I was looking at him all of the time and jumped to help, but could not reach him—so quick was the movement. Moreover, he had let go his ice axe, which he almost certainly would not have done had he been conscious, as it would have been his greatest aid to recovery.

I at once descended to where he lay on the rocks. He was not breathing nor was there any pulse or other sign of life. I arranged the body slightly and hastened to Many Glacier Hotel for help. I reached there at eleven a. m. The tragedy occurred at seven-thirty a. m.

A party was sent out at once and the body recovered as promptly as the difficulties would permit.

I have climbed with Dr. Wynn now for two years. He was an excellent mountaineer—always cautious and using good judgment. He took no risks. This also makes me certain that this was not a mountaineering accident, but rather a sudden physical seizure of some kind.

(Signed) HENRY H. GODDARD.

Many Glacier Hotel,
Thursday, July 27th, 1922.

DEATHS

STELLA E. HALL, wife of Dr. J. E. Hall, of Alexandria, died May 23 at the age of forty-five years, death resulting from influenza.

LAUGHLIN O. MALSBURY, M.D., of Peru, died in Chicago, July 4, at the age of fifty-five years. Dr. Malsbury graduated from the Kentucky School of Medicine, Louisville, in 1891. He was a member of the Indiana State Medical Association and the American Medical Association.

FRANK W. GARRETT, M.D., of Liberty Center, died July 17 at the age of sixty-seven years. Dr. Garrett graduated from the Medical College of Indiana, Indianapolis, in 1882. He was a member of the Wells County Medical Society, the Indiana State Medical Association and the American Medical Association.

FRANK B. WYNN, M.D., of Indianapolis, a leader among medical men of Indiana, and nationally known mountain climber, was killed July 27 in a 300-foot fall from a cliff near the summit of Mt. Siyeh, one of the highest peaks in Glacier National Park, Montana.

Dr. Wynn was born near Brookville, Indiana, in 1860. He graduated from DePauw University in 1883, and was granted the degree of Master of Arts by that school in 1886. In 1885 he graduated in medicine from the Miami Medical College of Ohio, following which he served one year as intern in the Good Samaritan Hospital. After five years in general, special and insane hospital practice, he spent the years 1892 and 1893 in Vienna and Berlin, giving emphasis to work in internal medicine, diagnosis, and pathology. Locating at Indianapolis in the fall of 1893, he was selected as the first city sanitarian of that city. At about the same time he became identified with the Department of Pathology of the Medical College of Indiana. In 1896 he organized and conducted the pathologic exhibit of the Indiana State Medical Association, and this feature of the Association's work grew to such size and excellence that in 1899 the Association appropriated money and directed Dr. Wynn to take the Indiana exhibit to that year's session of the American Medical Association. This venture was so well received by the national organization that it resulted the succeeding year in the founding of the scientific exhibit which is now recognized as a prominent and important feature of the American Medical



DR. FRANK B. WYNN

Association work, and for many years Dr. Wynn served as director of this American Medical Association exhibit. He was vice-president of the American Medical Association for 1921; served his State Association as president in 1914-15; was president of the Mississippi Valley Medical Association in 1920; and since 1895 has held the chair of professor of medicine in the Indiana University School of Medicine.

Aside from his activities in medical societies and medical school, Dr. Wynn has done considerable writing, notably among which is the series of articles on "The Physician" which have run the past two years in this JOURNAL, and which are now in the course of being published in book form. Dr. Wynn's character and high ideals are splendidly portrayed in this series of articles which deal with the physician himself and his relation to the profession and his fellow men, but especially noteworthy is the article in the December, 1921, issue, "The Rejuvenation of Medical Ethics", in which he gives "The Ten Commandments of Medical Ethics". These Ten Commandments later were beautifully and artistically engraved for framing purposes.

Dr. Wynn was a great lover of nature, and was a member of the Indiana Nature Study Club, president of the American Alpine Club, and president of the Indiana Historical Society. In 1911 he was appointed chairman of the Indiana centennial commission, in which capacity he served until after the centennial celebration in 1916. Recently he was active in putting under way the Lincoln Memorial Association. During the world war he served as a captain in the Medical Corps.

The medical profession and the public in general have suffered an inestimable loss in the death of so beloved a man, but his life and influence will be remembered for years to come.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers, for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

The Jasper-Newton Medical Society held a meeting at Goodland, June 30.

THE Vanderburgh County Medical Society held a meeting at Evansville, June 27.

DR. J. E. HALL, of Alexandria, is advertising his home, office and practice for sale.

THE Howard County Medical Society held its annual picnic at Cassville, June 29.

THE Jay County Medical Society held its regular meeting at Portland, July 20.

THE Huntington County Medical Society held its regular meeting at Huntington July 11.

DR. J. A. FREEZEE, of Bunker Hill, has returned from a vacation trip on Lake St. Clair.

THE Wabash County Medical Society held its regular monthly meeting July 20 at Somerset.

DR. F. E. BROAD, of Kentland, and Miss Gladys Smith, of Morocco, were married July 6.

DR. WILLIAM F. CLEVENGER and Miss Louise M. Weaver, both of Indianapolis, were married July 5.

DR. PARVIN M. DAVIS has gone into partnership with his father, Dr. D. F. Davis, at New Albany.

DR. G. E. MOATS, of Antwerp, Ohio, has moved to Fort Wayne, where he will practice medicine.

DR. JOHN J. CONNELLY, of Rockville, and Miss Harriet Hubbard, of Indianapolis, were married June 27.

DR. E. S. JONES has moved from Crawfordsville to Warsaw, where he has taken up the practice of medicine.

DR. JOSEPH HAUK, of Terre Haute, and Miss Jessie Leasure, of Oakland, California, were married June 26.

DR. I. S. MILLSTONE has removed from Gary, Indiana, to Cleveland, Ohio, where he will take up the practice of medicine.

DR. EDWARD A. SPITZKA has been appointed District Medical Officer, Second District, United States Veterans' Bureau.

DR. G. W. MACKENZIE was elected president of the Philadelphia Laryngological Society at the annual meeting on June 6th.

THE Association of Monon Surgeons held their annual convention at Michigan City, Indiana, for a week beginning July 24.

DR. GEORGE F. BEASLEY, of Lafayette, was seriously injured recently when he fell from a stepladder, falling on his head and shoulders.

DR. F. C. GUTHRIE, of Pendleton, has been appointed physician at the new Indiana reformatory during the construction period.

A $425,000 bond issue for the erection of an administration building and nurses' home at the City Hospital, Indianapolis, has been authorized.

DR. HARRY GARTON has accepted a position on the staff of doctors at the Indiana State Home for Feeble Minded Youths at Fort Wayne.

THE members of the Fountain-Warren County Medical Society and the Ben Hur Dental Association held a picnic at Covington July 12.

DR. ELWIN CLARK, of Clarksburg, and Miss Lois Thorne, of Greensburg, were married June 18 at Indianapolis. They will reside in Clarksburg.

DR. FRANK W. KERN has moved from Waymansville to Cincinnati, Ohio, where he has accepted a position with the United States Public Health Service.

DR. C. H. LAVENDER, Assistant Surgeon-General, has announced that there are twelve hundred lepers at large in twenty-five states at the present time.

DR. F. A. CHENOWETH, of Winchester, has been appointed United States examining surgeon for Randolph County, to succeed the late Dr. C. E. Milligan.

THE Kosciusko County Medical Society held a meeting on June 29 at Warsaw. Dr. A. C. McDonald presented a paper on "Acute Troubles in the Abdomen."

A contract has been let for the building of two additional wings to the Irene Byron Hospital, Fort Wayne. This will give space for twelve additional rooms.

THE Grant County Medical Society held a meeting at Marion June 27. A lecture-slide demonstration was presented by Dr. Channing W. Barrett, of Chicago.

DR. J. F. WEIR, of Evansville, has been ordered to Fort Bayard, New Mexico, where he will assume charge of the government tuberculosis sanitarium at that place.

DR. WALTER MCBETH, of Royal Center, and Miss Julia Faye Frye, of near Burnettsville, were married June 28. Dr. McBeth is practicing medicine at Royal Center.

DR. H. MONTFORD COX, of Brookston, and Miss Victorine Firsich, of Indianapolis, were married recently at Indianapolis and have taken up their residence at Brookston.

THIRTY-THREE American physicians have gone to Vienna under the leadership of Dr. George W. Mackenzie, to attend special courses given in ear, nose and throat diseases.

DR. RALPH S. CHAPPELL, of Indianapolis, is spending the summer months with Dr. G. W. Mackenzie, in the ear, nose and throat clinics of Vienna and other medical centers of Europe.

DR. FRANCIS CARTER WOOD, director of the Institute of Cancer Research, Columbia University, has announced the incorporation of the American Society for the Control of Cancer.

DR. CHARLES E. DE M. SAJOUS, of Philadelphia, has been awarded the 1922 American Medicine Gold Medal for his noteworthy contributions to the study of the glands of internal secretion.

DR. WILLIAM H. SPIETH, of Indianapolis, and Miss Viva Pearl Wilson, of Roachdale, Indiana, were married Sunday, June 25. They have taken up their residence at Lebanon, Indiana.

DR. FREDERICK C. WARNSHUIS, of Grand Rapids, Michigan, received the honorary degree of Doctor of Science from Hope College, Holland, Michigan, at its fifty-seventh annual commencement.

DR. G. E. GILLILAND has removed from Terre Haute to St. Louis, Missouri, where he will practice internal medicine. Dr. Gilliland expects to be affiliated with the Washington University Medical School.

DR. CHARLES J. HATFIELD announced his resignation as managing director of the National Tuberculosis Association at the annual meeting of the Association to take effect on October 1, 1922. He will be succeeded by Dr. L. R. Williams.

DR. F. E. WILLIAMS, of Indianapolis, has been appointed medical director of the National Committee for Mental Hygiene, with headquarters in New York City. Dr. Williams has been a member of the staff of the committee since January, 1917.

A new soldiers' hospital is to be built near the Great Lakes Naval Training Station, near Chicago, at a cost of three million dollars. A new hospital for veterans is also to be built at Camp Lewis, Tacoma, Washington, at a cost of one and one-half million dollars.

A joint meeting of the members of the Jennings, Jackson and Bartholomew medical societies was held June 27 at Columbus. Dr. Osterman, of Seymour, presented a paper on "Children's Diseases," and Dr. J. K. Hawes, of Columbus, presented a paper on "Feeding of Babies."

DR. J. MORTON HOWELL, of Dayton, Ohio, has been nominated by President Harding to be the first American minister to Egypt. Dr. Howell has been a practicing physician at Dayton for many years and for the past ten months has been diplomatic agent and consul general for this government in Egypt.

AT the fifty-seventh annual meeting of the Michigan State Medical Society, at Flint, June 7th to 9th, Dr. William T. Dodge was elected president; Dr. J. G. R. Manwaring, Dr. William E. McNamara, Dr. T. F. Heavenrich and Dr. W. K. West, vice-presidents; Dr. Frederick C. Warnshuis, secretary.

DURING July the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: The Abbott Laboratories: Neocinchopen-Abbott Tablets, 5 grains. Louis Hoos: Hoos Albumin Milk. Mallinckrodt Chemical Works: Benzyl Benzoate-M.C.W.

THE annual outing of the Second District Medical Society was held on Eagle Island, in the Wabash River, July 14. Papers were presented by Drs. A. A. Rang, of Washington; F. H. Austin, of Bloomington; Homer Woolery, of Bloomington; G. C. Porter, of Linton; James N. McCoy, of Vincennes; G. D. Scott, of Sullivan; and J. W. Smadel, of Vincennes.

AN institute of public health has been established at Columbia University through the bequest of the late Joseph R. DeLamar. The work of the new institute of public health will be chiefly research and the training of research workers. Dr. Haven Emerson will fill the new office of professor of public health and administration.

THE United States Civil Service Commission announces an open competitive examination for Junior Medical Officer, Indiana Service and Coast and Geodetic Survey. Applications will be rated as received until further notice. Applicants should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C.

IN a recent review of the activities of the Rockefeller Foundation, President G. E. Vincent states that one hundred fifty-seven individuals held fellowships during 1921, funds for which were directly or indirectly supplied by the Rockefeller Foundation. The distribution of these fellows include: Seventy-one Americans, one Belgian, seven Brazilians, eleven Canadians, one Singhalese, seventeen Chinese, one Colombian, two Costa Ricans, nineteen Czechs, seven British, four French, one Guatemalan, one Mexican, two Nicaraguans, seven Poles, two Salvadoreans, two Syrians and one Norwegian.

THE faculty in the Harvard Medical School has made many changes. L. T. Troland, formerly instructor in psychology, has been promoted to the post of assistant professor. Dr. Reginald Fitz, formerly professor of medicine at the University of Minnesota, has been named associate professor of medicine at Harvard. Other appointments are: Dr. E. P. Richardson, assistant professor of surgery; Dr. J. Bronfenbrenner, assistant professor of bacteriology; Dr. Alice Hamilton, assistant professor of industrial medicine; Dr. G. C. Shattuck, assistant professor of tropical medicine; Dr. David Cheever, assistant professor of surgery; Dr. L. D. Felton, assistant professor of preventive medicine and hygiene; Dr. J. L. Gamble, assistant professor of pediatrics; Dr. J. S. Stone and Dr. John Homans, instructors in surgery; and Drs. William H. Smith and Frank H. Hunt, instructors in medicine.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District—Councilor	No. of Counties	1921 Memberships	1922 Memberships to date	Percentage
1st—Dr. Willis	7	176	175	.99
2nd—Dr. Schmadel	7	149	145	.96
3rd—Dr. Leach	9	130	117	.90
4th—Dr. Osterman	10	138	136	.98
5th—Dr. Weinstein	5	158	160	1.02
6th—Dr. Spilman	8	150	160	1.07
7th—Dr. Earp	4	425	442	1.04
8th—Dr. Conrad	5	172	164	.95
9th—Dr. Moffitt	10	253	251	.99
10th—Dr. Shanklin	5	151	140	.93
11th—Dr. Black	6	191	191	1.00
12th—Dr. Calvin	8	241	247	1.02
13th—Dr. Berteling	8	274	254	.92
	92	2608	2582	

INDIANA STATE MEDICAL ASSOCIATION

The Program Committee has announced the following list of scientific papers for the annual session of the Indiana State Medical Association, to be held at Muncie, September 27, 28 and 29, 1922:

GENERAL MEETINGS

Thursday a. m.

Address of President: "The Status of the Profession in Indiana," Dr. William R. Davidson, Evansville.

Symposium: "Endocrinology"

1. Medical Phase—G. W. McCaskey, Fort Wayne.
   Discussants: Edgar F. Kiser, Indianapolis; L. P. Drayer, Fort Wayne.
2. Neurological Phase—C. C. Bitler, Newcastle.
   Discussants: Albert E. Sterne, Indianapolis; Charles P. Emerson, Indianapolis.
3. Surgical Phase—C. M. Mix, Muncie.
   Discussants: Tom Jones, Anderson; H. H. Martin, LaPorte.

Friday p. m.

Symposium: "Meningitis"

1. Differential Diagnosis—Charles F. Neu, Indianapolis.
2. Treatment—Miles F. Porter, Jr., Fort Wayne.
3. Otitic Meningitis—Harry Boyd-Snee, South Bend.

   Discussants: Robert M. Moore, Indianapolis. Earl O. Daniels, Marion. George V. Cring, Portland. D. O. Kearby, Indianapolis.

SECTION ON MEDICINE

Thursday P. M.

DISTURBANCE OF CARBOHYDRATE METABOLISM.....John H. Warvel, Indianapolis
Discussants: B. M. Edlavitch, Fort Wayne. C. R. Strickland, Indianapolis.

CONGENITAL PYLORIC STENOSIS.....O. G. Pfaff, Indianapolis
Discussants: James C. Carter, Indianapolis. W. D. Gatch, Indianapolis.

THE TREATMENT OF PULMONARY TUBERCULOSIS.....Alfred Henry, Indianapolis
Discussants: Gardner C. Johnson, Evansville. Charles R. Bird, Greensburg.

THE THERAPY OF SYPHILIS.....J. E. Luzzader, Bloomington
Discussants: C. L. Bock, Muncie. Frank G. McCarthy, Terre Haute.

Friday A. M.

SENSITIVITY TO EPIDERMAL AND POLLEN PROTEINS.....James Wynn, Indianapolis
Discussants: C. G. Beall, Fort Wayne. William D. Asbury, Terre Haute.

EPIDEMIC JAUNDICE.....S. C. Waters, Middletown
Discussants: W. M. Stout, Newcastle. Will P. Shimer, Indianapolis.

MEDICAL ADDRESS.....Charles Louis Mix, Chicago

SEQUELLAE OF LETHARGIC ENCEPHALITIS.....W. A. Fankboner, Marion
Discussants: Wier Miley, Anderson. C. A. Sellers, Hartford City.

SECTION ON SURGERY

Thursday P. M.

SURGICAL ADDRESS..Charles H. Frazier, Philadelphia

DRAINAGE OF INTRA-ABDOMINAL ABSCESSES.....J. Rilus Eastman, Indianapolis
Discussants: Miles F. Porter, Sr., Fort Wayne. Wm. J. Moore, Muncie.

THYROID DISEASE.....A. P. Roope, Columbus
Discussants: J. Y. Welborn, Evansville. F. H. Jett, Terre Haute.

GASTRIC ULCER...Frank W. Foxworthy, Indianapolis
Discussants: W. H. Foreman, Indianapolis. H. O. Bruggeman, Fort Wayne.

THE TECHNIC OF PERINEAL REPAIR WHEN ASSOCIATED WITH RECTOCELE, CYSTOCELE AND UTERINE PROLAPSE.....F. C. Walker, Indianapolis
Discussants: A. A. Rang, Washington. J. H. Weinstein, Terre Haute.

TUBERCULOSIS OF THE FEMALE GENERATIVE ORGANS.....E. E. Padgett, Indianapolis
Discussants: Carl Habich, Indianapolis. G. B. Jackson, Indianapolis.

Friday A. M.

OCCIPUT POSTERIOR POSITIONS.....A. M. Mendenhall, Indianapolis
Discussants: Fred Clapp, South Bend. Clay A. Ball, Muncie.

SURGERY OF THE GALL BLADDER AND DUCTS.....H. A. Duemling, Fort Wayne
Discussants: Hugo O. Pantzer, Indianapolis. J. C. Sexton, Rushville.

GALL BLADDER SURGERY.....Simon J. Young, Gary
Discussants: E. S. Jones, Hammond. G. G. Eckhart, Marion.

DISEASES AND INJURY TO THE HIP JOINT.....G. D. Marshall, Kokomo
Discussants: C. C. Terry, South Bend. M. S. Davis, Marion.

REPAIR OF UNCOMMON FRACTURE CASES.....M. A. Austin, Anderson
Discussants: J. E. Hiatt, Richmond. E. H. Clauser, Muncie.

THE SURGICAL ENGINEER..H. R. Allen, Indianapolis
Discussants: D. S. Wiggins, Newcastle.
M. E. Klingler, Garrett.

EYE, EAR, NOSE AND THROAT SECTION
Thursday P. M.

CHAIRMAN'S ADDRESS.....
.....Carl H. McCaskey, Indianapolis
SYSTEM AND THOROUGHNESS IN EYE EXAMINATION AND TREATMENT.....F. S. Cuthbert, Kokomo
Discussant: W. A. Hollis, Hartford City.
ENDONASAL OPERATIONS ON THE LACHRYMAL SAC..
.....Wm. B. Chamberlin, Cleveland
CYCLOPLEGICS IN DETERMINING REFRACTIVE ERRORS
.....Albert E. Bulson, Jr., Fort Wayne
Discussant: Thomas C. Hood, Indianapolis.

Friday A. M.

CATARACT EXTRACTION AND ITS COMPLICATIONS...
.....W. F. Hughes, Indianapolis
Discussant: Frank A. Morrison, Indianapolis.
PHASES OF CHRONIC PHARYNGEAL INFECTION.....
.....W. S. Tomlin, Indianapolis
.....D. S. Adams, Indianapolis
Discussant: K. S. Brown, Muncie.
EYE DRAINAGE.....G. W. Spohn, Elkhart
Discussant: C. N. Howard, Warsaw.

HAMILTON COUNTY

The Hamilton County Medical Society had an outing on Sunday, July 9, at Horseshoe Lodge, fifty doctors and their families being present. A chicken dinner was served at 5:30. The afternoon and evening were so thoroughly enjoyed, and proved such a success, that a similar meeting for next year was agreed upon.

W. F. BAKER, Secretary-Treasurer.

CORRESPONDENCE

STOLEN OR LOST NARCOTIC ORDER FORMS

Treasury Department, Internal Revenue Service,
Office of the Collector, Indianapolis, Indiana.
To All Persons Registered Under the Harrison Narcotic Law:

The following ruling is for your information and guidance.

Effective immediately, Article 111½ is hereby added to Regulations 35, Revised November, 1919, as follows:

Article 111½. STOLEN OR LOST ORDER FORMS. Whenever any used or unused order forms are stolen from, or lost (otherwise than in course of transmission) by, any person registered under the Act, he shall immediately upon discovery of such theft or loss, report the same to the Commissioner of Internal Revenue, Washington, D. C., stating the serial number of each duplicate and original form stolen or lost: If the theft or loss includes any original orders received from other persons and the registrant is unable to state the serial numbers of such orders, the date of receipt thereof and the names and addresses of the purchasers thereunder should be stated. If the theft or loss is of or includes any entire books and the registrant is unable to state the serial numbers of the duplicate and original forms contained therein, the theft or loss shall in like manner be reported to the Collector of Internal Revenue from whom such books were purchased, instead of to the Commissioner of Internal Revenue, with a statement, in lieu of the numbers of the forms contained in such books, of the date or approximate date of purchase thereof: and the Collector immediately upon receipt of such report shall transmit the same to the office of the Commissioner with advice from his records (Form 679) of the serial numbers of the forms contained in such books.

M. BERT THURMAN,
Collector of Internal Revenue.
District of Indiana.

Approved:
D. H. Blair, Commissioner of Internal Revenue.
A. W. Mellon, Secretary of the Treasury.

TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

"MEDICAL" TESTIMONIALS FOR CHIROPRACTIC.—Chiropractors affect, with "patent medicine" fakers, a fine disdain for scientific medicine and the medical practitioner. How readily, however, do both seize with avidity any statement made by an individual who may be presumed to have the right to put "M. D." after his name—provided that statement seems favorable to the cause or may be so twisted as to make the public believe that a reputable physician has spoken a good word either for chiropractic or nostrum industry.

For some time there has been going the rounds a chiropractic advertisement purporting to quote "Opinions of Well Known Medical Men" on chiropractic. The material obviously emanates from one of the chiropractic "ad" factories. These make a business of supplying the individual chiropractor with advertising copy that he, because of educational deficiencies, would be unable to write for himself. According to these stock advertisements: ". . . there is an ever increasing number of M. D.'s all over the United States and Canada who understand, appreciate and practice straight chiropractic to the exclusion of medicine and every other method, as witness the following selected at random:" Then follow what purport to be quotations from physicians. An examination of the records of the individuals who are quoted permits an appraisement of their testimonials. (*Jour A. M. A.*, July 1, 1922, p. 57.)

DIGALEN.—Digalen was introduced with the claim that it was soluble amorphous digitoxin (a substance unknown to chemists) and with the claim that it possesses all the advantages and none of the disadvantages of digitoxin, such as cumulative effect and the production of nausea (claims which have been made for many proprietary digitalis preparations, but which always prove untenable). In 1909 the Council on Pharmacy and Chemistry admitted Digalen to New and Nonofficial Remedies after the manufacturer had discontinued the palpably unwarranted claims which had been made for the preparation. The Council did not determine whether Digalen contained "soluble amorphous digitoxin," but accepted it merely as a standardized and fairly stable digitalis preparation. Subsequently, the claim that it was a stable preparation was challenged. In view of the increased extravagance of the claims for Digalen, the Council in 1915 made a re-examination of this product and directed its omission from New and Nonofficial Remedies. There is no available evidence to indicate that Digalen has any advantage over tincture of digitalis or the infusion of digitalis for oral administration or that it is equal to ouabain or strophanthin for intramuscular or intravenous injection. With a better knowledge of proper dosage—for instance by Eggleston—an increasing number of practitioners find that, except in exceptional cases, the desired action of digitalis can be obtained by the administration of the official tincture of digitalis. (*Jour. A. M. A.*, July 1, 1922, p. 61.)

DESENSITIZATION TO RHUS.—Contrary to the theory of "desensitization" to rhus poisoning by internal administration of tincture of rhus, it appears that the susceptibility to rhus may be increased by successive intoxications. (*Jour. A. M. A.*, July 15, 1922, p. 220.)

MORE MISBRANDED NOSTRUMS.—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act:

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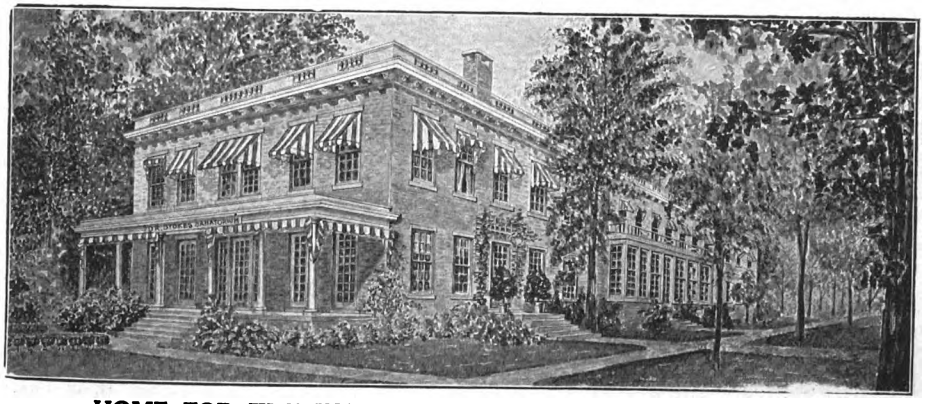
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NAPTHOLENE (Dr. E. E. Sonnanstine), containing gasoline, kerosene and a small quantity of resin of red pepper.

HOMOSAN (International Toilet Co.), consisting of tablets containing a trace of strychnin.

HASKIN'S COUGH MEDICINE (Haskin Medicine Co.), liquid carrying tar, chloroform, sugar and water.

MCMULLIN'S TONIC (Tilden McMullin Co.), containing alcohol, glycerin, iodids, phenol (carbolic acid) and water.

DUPREE'S FRENCH SPECIFIC PILLS (United Drug Exchange), containing aloes, iron sulphate and a trace of alkaloids, with indications of cottonroot bark and tansy.

APOLLO BRAND SEXUAL PILLS (S. Pfeiffer Mfg. Co.), containing extract of nux vomica and damiana and phosphorus.

GIEPSI VEMELA (Giepsi Vemela Co.), consisting of vegetable extractives, sugar and water.

MONTAUK STAR BRAND PILLS, containing iron sulphate, aloes and a trace of strychnin.

PRINCESS BRAND PENNYROYAL, TANSY AND COTTON ROOT BARK COMPOUND PILLS, containing aloes.

SHORES LUNG BALSAM (Shores-Mueller Co.), containing pine tar, ammonium chlorid, a salicylate, chloroform, glycerin, sugar and water.

SHORES MOUNTAIN OIL LINIMENT (Shores-Mueller Co.), containing cajeput, wintergreen, sassafras, cedar oils, camphor, ammonia, borax, washing soda, plant extractives, capsicum oleoresin, alcohol and water.

SHORES SARSAPARILLA (Shores-Mueller Co.), containing extracts of plant drugs, including a laxative, a salicylate, a small amount of ammonium chlorid, a trace of alcohol, glycerin and water. (*Jour. A. M. A.*, July 15, 1922, p. 232.)

HAELEPRON TABLETS NOT ADMITTED TO N. N. R.—Haelepron Tablets are made by Bodenstein and Galinsky, Berlin, Germany, and sold in the United States by the Haelepron Sales Co., New York. The following, nonquantitative statement of the composition of Haelepron Tablets appears on the trade package: "Haemaglobin, Lecithin, Calc. Lact., Protein vegetab., Ferr. Sacch., Ferr. pyrophos." The Council on Pharmacy and Chemistry finds Haelepron Tablets inadmissible to New and Nonofficial Remedies because, (1) their composition is indefinite and semisecret; (2) the recommendations for their indiscriminate use are unwarranted; (3) the name is not descriptive of their composition, and (4) they are an irrational and useless combination which can have little, if any, effect on the conditions for which they are recommended. (*Jour. A. M. A.*, July 22, 1922, p. 319.)

PLATT'S CHLORIDES.—An advertisement for Platt's Chlorides calls attention to the fact that chlorin antiseptics are at present in favor. The statement is then made that "chlorid of lime" is perhaps the best known of the older chlorid antiseptics. In the advertising it is stated, more or less directly, that Platt's Chlorides contain "chlorid of lime." Chlorid of lime is an unscientific name for chlorinated lime, official in the U. S. Pharmacopeia as Calx chlorinata. An analysis of Platt's Chlorides, made in the A. M. A. Chemical Laboratory several years ago, failed to show that the preparation contained any active chlorin derivatives upon which the virtues of chlorinated lime depends. Chlorides were present, but chlorides are not known to have any germicidal effect. A re-examination of Platt's Chlorides, made recently in the Association's Chemical Laboratory, again demonstrated the absence of active chlorin such as contained in chlorinated lime. (*Jour. A. M. A.*, July 22, 1922, p. 319.)

NEW AND NONOFFICIAL REMEDIES

ANTI-ANTHRAX SERUM—P. D. and Co.—An anti-anthrax serum (see New and Nonofficial Remedies, 1922, p. 284), marketed in syringes containing 50 Cc. Parke, Davis and Co., Detroit.

ANTIMENINGOCOCCIC SERUM—P. D. and Co.—An antimeningococcus serum (see New and Nonofficial Remedies, 1922, p. 286), marketed in packages of two syringes, each containing 15 Cc.; also in packages of one syringe containing 50 Cc. Parke, Davis and Co., Detroit.

DIPHTHERIA TOXIN-ANTITOXIN MIXTURE—P. D. and Co.—A diphtheria antitoxin-toxin mixture (see New and Nonofficial Remedies, 1922, p. 282.) Each cubic centimeter represents a single human dose. It is marketed in packages of three bulbs representing one immunizing treatment; also in vials containing 20 Cc. Parke, Davis and Co., Detroit.

TUBERCULIN B. F. (Bovine)—P. D. and Co.—A preparation of tuberculin Denys (see New and Nonofficial Remedies, 1922, p. 296). It is made in the same manner as tuberculin Denys (Human), except that the bovine type of tubercle bacillus is used. It is marketed in packages of six 1 cubic centimeter sealed glass tubes. Parke, Davis and Co., Detroit.

BORCHERDT'S MALT COD LIVER OIL AND PHOSPHORUS.—Each 100 Cc. contains phosphorus, 0.009 Gm.; cod liver oil, 25 Cc., and Malt Extract (Plain), (see New and Nonofficial Remedies, 1922, p. 176), 75 Cc. Borcherdt Malt Extract Co., Chicago. (*Jour. A. M. A.*, July 8, 1922, p. 135.)

YEAST PREPARATIONS.—The Council on Pharmacy and Chemistry has adopted a general discussion of yeast preparations for inclusion in New and Nonofficial Remedies. In this article it is stated:

> The use of yeast as a bactericide in external infections has been practically abandoned. Yeast and preparations derived therefrom have been widely extolled of late as sources of vitamine B whenever there may be indications for its therapeutic use. However, these indications are so indefinite and the opportunities of obtaining vitamin B through the customary foods are so abundant that the demand for yeast vitamin seems to be limited. The therapeutic aspects of the vitamin problem are still in the experimental stage. Yeast has a laxative action, but the cause of this action is not known. Yeast has been recommended for internal administration because of its supposed beneficial effects upon furuncles, acne, etc. Many clinicians doubt this effect, which may, after all, be expected from any anticonstipation agent. It is not clear to what extent, if at all, live cultures of yeast may be used to change the intestinal flora in cases where such a change is desirable. (*Jour. A. M. A.*, July 8, 1922, p. 135.)

EPINEPHRINE—G. W. C. Co.—A brand of epinephrine—N. N. R. It is marketed in vials containing epinephrine—G. W. C. Co. (base), 1 grain, and in the form of Epinephrine Chloride Solution—G. W. C. Co., which contains epinephrine hydrochloride equivalent to 1 part of epinephrine in 1,000 parts of physiological solution of sodium chloride. G. W. Carnrick Co., New York.

PITUITARY EXTRACT-LEDERLE (*Obstetrical*).—An extract of the posterior lobe of the pituitary body of cattle, approximately two and one-half times the strength of solution of hypophysis, U. S. P., preserved by the addition of chlorbutanol. For actions and uses, see New and Nonofficial Remedies, 1922, p. 213, under Pituitary Gland. Pituitary Extract-Lederle (Obstetrical) is marketed in 0.5 cubic centimeter and 1 cubic centimeter ampules. Lederle Antitoxin Laboratories, New York.

PITUITARY EXTRACT-LEDERLE (*Surgical*).—An extract of the posterior lobe of the pituitary body of

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MUNCIE NUMBER

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OF THE
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ISSUED MONTHLY under the Direction of the Council

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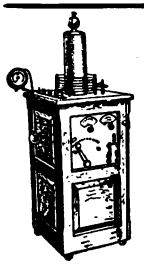
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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY under Direction of the Council ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV SEPTEMBER 15, 1922 NUMBER 9

ORIGINAL ARTICLES

THE CORRECTION OF CLUB FEET*

H. R. ALLEN, M.D.
INDIANAPOLIS

"The Treatment of Club Feet" was the title assigned for my paper. I think these feet have been treated entirely too much, so I have substituted the word "Correction" in place of "Treatment" as it is more appropriate to the method I shall describe. In the least number of words I desire to present a few facts concerning this system of transforming club feet into perfectly normal feet.

There is nothing mysterious about this standardized deformity nor about any one of the four distinct foot deformities that compose it. In over twenty-five years this system has not failed and out of the hundreds of doctors who have referred patients to me for this system of treatment, there is not one who can point to a single case that ever had to return for reoperation. The cases treated range in age from six hours to over sixty years old. I do not believe in "recurrent club feet" nor in recurrent surgery. I do not believe in substituting one permanent deformity for another.

I do believe that any case of this deformity can be absolutely corrected in form and function, with normal range of motion. The treatment must be completed in less than one year, no matter how old the patient is. In younger cases the time limit, of course, is greatly reduced, and the process is simplified. Furthermore, several of the complications[1] frequently associated with this standardized deformity are automatically and simultaneously corrected.

In the correction of standardized club feet there is absolutely no excuse for cutting or breaking or even touching a bone. However, it is very essential to rearrange their abnormal, deformed positions. This can be done by releasing the grip of the short, soft, deformed tissues that hold the bones in a false position. I have stated only a few of many important and commendable facts pertaining to this system, which is as painless as any other system could be and its results gain favor by comparison with any system of treatment.

The development of this system began long ago. It is founded upon the principle of combining the best methods of permanently correcting each one of the four individual and distinct foot deformities into one straightforward, logical and surgical procedure. In order to perfect this system it was found necessary to construct certain precision tools, and also to design dependable devices that would maintain with accuracy each degree of overcorrection during post-operative treatment.

The best and most skillful operation may become a partial or complete loss if the benefits gained surgically cannot be maintained mechanically.

The standardized club foot, shown in Fig. 1, is a compound deformity composed of adduction, cavus, varus and equinus. Associated deformities, regardless of their frequency or infrequency, are merely complications, since they do not occur constantly in all club feet. In

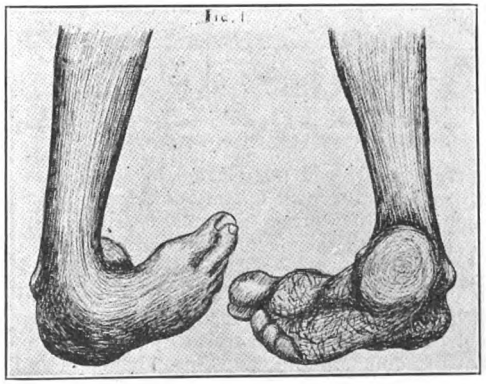


Fig. 1. Dorsal and plantar view of standardized club foot showing proximity of heel and toe due to the combination of adductus and cavus. Think how remote they are in a flat, valgus foot. Walking is done on the top of the foot instead of on the much wrinkled, unused sole. The heel is higher than the malleoli. The toes are hooked up by adduction. Evidently equinus refers to the tarsus primarily and to the anterior foot secondarily.

*Read before the General Meeting of the Indiana State Medical Association. Indianapolis Session, September, 1921.

(1) In a previous article, "Facts Concerning Club Feet," this deformity is standardized and several of the frequently associated deformities are referred to as complications, so further mention of them here is unessential as we are discussing merely the correction of "Standardized Club Feet."

working out this system of treatment, the permanent correction of adduction was first developed, then each of the succeeding separate and distinct foot deformities was taken up in the order mentioned above. As development progressed it was found possible and practical to convert the deformities of adduction and cavus simultaneously into abduction and planus by using one reduction tool. The deformities of varus and equinus are individually converted into valgus and calcis positions by one other precision tool, but the position of the tool must be turned 90 degrees. The four component deformities are converted into their opposite deformities by using two reduction tools.

The next item of great importance was to develop a single retention tool that would hold with exact precision every desired degree of overcorrection until the foot was sound and well. With these precision tools and with strict attention to the details of this system, any surgeon skilled in mechanical affairs ought to secure perfect results every time. The whole topic of treating club feet involves good or bad

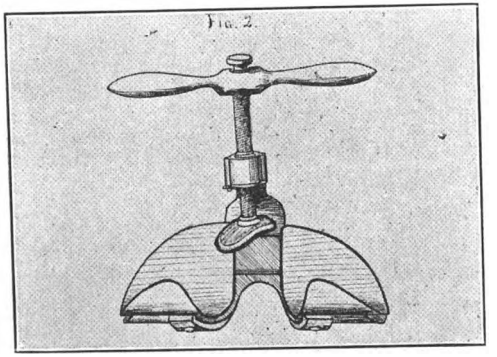


Fig. 2. The adducto cavus corrector is adjustable for all sizes of feet whether rights or lefts. When its double sliding tracks are lubricated, friction becomes practically negligible. After designing a variety of these instruments with roller and ball bearings and pivoted rather than track movements experience has recommended this type.

mechanics. If patients, treated by any system, return for subsequent operations there is something radically wrong with the system, with the tools, with the operator, or with all three.

The tools used in the correction I am now to describe are named according to the duty each performs. For example, the adducto-cavus tool (Fig. 2) is used to transform the deformities of adduction and cavus into abduction and planus. The foot is placed in the tool as shown in Fig. 3. Then the screw pressure is applied at an angle of 45 degrees, which approximately represents the resultant of resistance offered by the combination of adduction in a horizontal plane and cavus in a vertical plane of flexion. When the pressure is applied for ten seconds, and never longer, the heel and toe instantly move away from each other.

In order to avoid unnecessary pressure under the tarsal pad (Fig. 3 A) a double sliding track for heel and toe plates (Fig. 3 A & B) are provided to reduce friction. This tool never crushes bones. It merely lengthens the short, deformed, soft tissues as they present themselves in offering resistance to correction. Previous to using this tool, however, the flexor brevis digitorum and other gross tissues remote from bones are divided by the tenotome through a skin puncture ⅛ of an inch long.

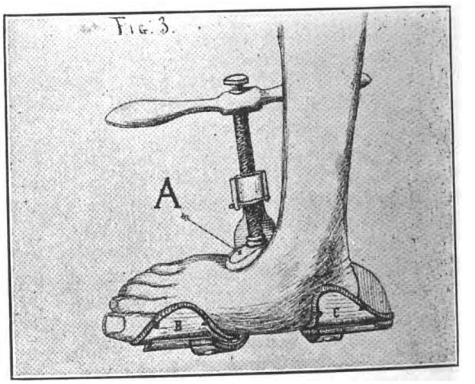


Fig. 3. The foot is shown converted into a position of abducto-planus. The pressure of pad "A" has produced a separation of "B" from "C". Note that the pads on "B" and "C" are sewed fast to the sliding platforms.

The remaining two deformities are corrected separately by the varo-equinus instrument shown in Fig. 4 A. In correcting the varus deformity the long axis of the foot is placed at right angles to the long lever as shown in Fig. 4 B. In using this instrument for any purpose the strap must always be used below

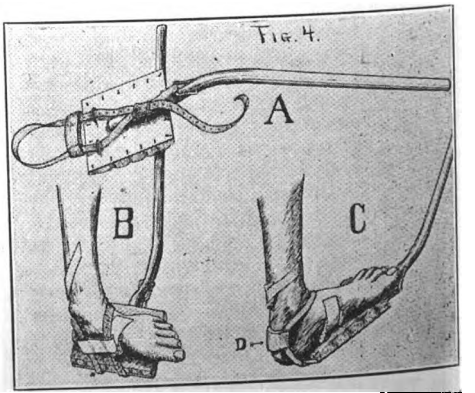


Fig. 4. The long lever arm is bent up for the sim... a wagon pulled by its tongue will go straighter than it ... from behind. As a general rule it is better to lead ... This tool with its pad securely sewed in place gives ... of position between foot and leg provided the strap is ... malleoli. It is therefore useful in breaking up adhesions ... dislocated ankles and correcting rigid flat feet and the ... equally on right or left feet of almost any size.

the anke bones. The lever arm is so long[2] that the power to be employed is minutely and safely gradated. The little finger is strong enough to convert any varus deformity into an extreme valgus position.

The varo-equinus instrument is now turned 90 degrees so that the long lever lies parallel with the long axis of the foot as shown in Fig. 4 C. The transverse heel pad (D) is placed across the heel and the lever is brought up on a trial trip to see that all anterior foot flexion has been overcome (Fig. 4 C). Then the Achilles[3] tendon is cut in the usual oblique manner and then the lever is brought up until the equinus deformity is transposed into an extreme position of calcis.

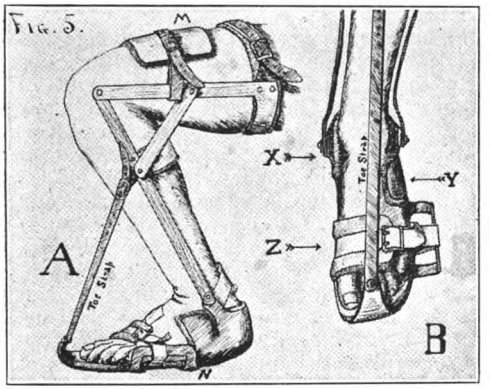


Fig. 5. The knee joint is locked with foot and femur parallel, producing a popliteal angle less than a right angle. Pads "M & N" represent an orthopedic vice for the thigh, leg and foot although the ankle joint may move. One look is sufficient evidence that the foot cannot turn in while the brace is on. Furthermore any normal degree of eversion is self evidently a simple matter of twisting the lower ends of the leg bars outward, or you may set the ankle joint rivet farther back on the outside than on the inside. To remove the brace only four straps are to be unbuckled. The straight edge out rigger on the little toe side projects far enough to control any degree of abduction.

The surgical correction is now completed provided the little finger can easily lead the foot into the extreme limits of normal range of motion in each of the opposite deformities, because success or failure abide in the zone of the tarsus.

Assuming that the surgical correction is now complete, we should study most carefully and critically both the construction and the rules for wearing the adult retention brace shown in Fig. 5 A. This brace, a simple device, devoid of all superfluous parts, fulfilling its exact purposes, is designed on the ancient plan of keeping the foot and femur parallel[4] and at the same time holding the leg and thigh so that they make an angle, less than a right angle, with its apex in the popliteal zone. No man can hope for perfect and uniform results by using any other known position. This one brace gives absolute and precise control over each position gained during the surgical correction and maintains that gain until the foot is permanently cured. The padded foot plate (Fig. 5 A & B) is provided with vertical plates for the inside of the heel and for the outside of the tarsus. The inelastic webbing strap pulling across the pad on the anterior part of the foot acts like the power arm of a lever and controls any desired amount of abduction by its outward fixation. The arrows (X, Y & Z) in Fig. 5 B indicate the direction of lever energy. The control over the corrected cavus and equinus is regulated by the toe strap. The desired amount of overcorrected varus is maintained by having the padded foot plate hinged higher on the external than on the internal side. The pad that rests on top of the thigh, indicated by the letter M, prevents the knee from rising when the toe strap is tightened. Pads M and N represent a fixation vice for securing the foot, leg and thigh. The bars along the thigh and leg making in-toeing impossible, and assure any normal amount of out-toeing by merely twisting the lower parts of the leg bars outward.

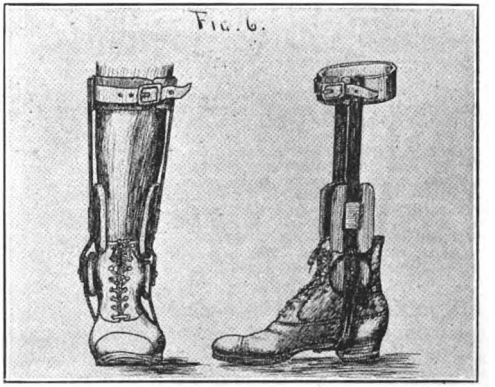


Fig. 6. Front and side view of left walking brace with sole and heel thicker on external side. This is a two bar brace with both internal and external ankle and low leg pads. Ordinarily either type of pad is sufficient, provided a firm bearing against the external side is secured. In order to make a one bar brace you cut off the vertical, internal stirrup close to the sole and detach the leg bar from the internal end of the leg band. Then slip the leg band around 90 degrees and secure it to the top of the external leg bar. Patients who have walked all their lives on the tops of their feet appreciate the sense of security afforded by the double barred brace with firm bearing pads on both sides of their ankles when they walk for the first time in their lives on the soles of their feet.

(2) Short levers are considered very dangerous because tissues not intended to be elongated may be instantly and unintentionally torn and damaged after the resisting tissues let go under the strained muscles of the operator.

(3) In adult cases the flexor brevis and the Achilles tendon are cut. Sometimes the anterior tibial is cut but I have never found it necessary to do any other cutting. If each puncture area is sterilized, and covered with gauze held in place by a strip of spirally applied adhesive plaster, one end of it can be pulled up when the tenetome is used and instantly put back. This prevents contamination during manipulation. It saves time and frequently the loss of one drop of blood, aside from betraying that commendable quality of forethought.

(4) More than 50 years ago, my father was the first surgeon to use a brace that held the foot and femur parallel while correcting a club foot. More than 25 years ago I demonstrated the advantages of the acute popliteal angle.

Except for removing the brace once or twice a day for massage or bath or inspection under bearing areas, this brace is worn constantly until the foot shows no tendency to return to any one of its original foot deformities, after being entirely free from all restraint for several hours. It is then worn only at night and the walking brace is worn during the day.

Front and side views of the walking brace are shown in Fig. 6. It may be made of one, or preferably two, vertical bars hinged at the ankle to the stirrup that is riveted to the sole of the shoe just in front of the heel. The sole and heel are thicker externally than internally. This brace should be worn for several months to encourage a normal range of valgus motion and to provide ample time for cartilaginous and osseous development where needed in the tarsal zone.

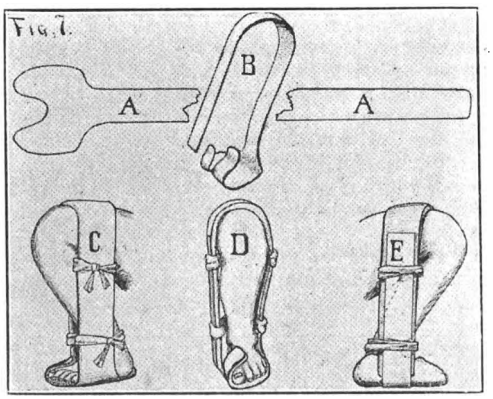


Fig. 7. "AA" represents the galvanized pattern for the infant retention brace before being bent into proper shape. "B" represents it bent into shape before being padded inside and out with woolen blanket cloth. The location of the bend over knee determines the length. Gauze bandages behind the popliteal space hold the knee forward, while one behind the heel prevents posterior displacement. A piece of adhesive plaster runs all the way around the brace and secures the size of the brace after it has been determined. Any degree of correction is easily established by bending the brace where bending is indicated. In this brace as in the adult brace the foot and femur parallel design takes care of any degree of in toeing or out toeing. Notice too that the bandages are not constrictors. They do not surround the leg. They merely go behind it and behind the heel.

Fig. 7 shows the infant retention brace. This is the simplest and most fool-proof of all surgical appliances that lay any claim to absolute efficiency. It is sanitary and it is easy to remove and to replace. It is adjustable for size and growth, and for absolute control over each item of overcorrection. It is made of a single piece of flexible, galvanized, non-rusting steel as shown in Fig. 7 A A & B. It is padded and worn in comfort. Also it is built on the foot and femur parallel plan with an acute popliteal angle. Since infants do not walk there is no need for discussing their walking braces. They seldom require any operation other than manipulation, but if the tarsus does not yield completely by manipulation then see to it that it yields by the other methods and stand firm for the permanent and perfect correction of every detail.

DISCUSSION

DR. G. D. MARSHALL (Kokomo): Dr. Allen's paper of course deals with the mechanical treatment of club feet, and I am perfectly in accord with that opinion. I think that is the method of choice in dealing with this condition In the pathological anatomy of club feet we have certain things to deal with. One of them is the fact that the deltoid ligament holds the foot in the position of varus. It has been found by dissection that if all the other ligaments were removed and the deltoid remained, the deformity would persist. Reasoning from that standpoint there have been various operations advised.

In the treatment of this condition age has considerable to do with the result, and indicates the method of treatment. I am not quite so sanguine as Dr. Allen about the age of these patients. If you are going to reform a foot, treatment must be early, but operation cannot be done before the child is two years old, as before that age the bones are not sufficiently formed to permit of the dissection of the periosteum from the bone, with insertion of ligaments.

The doctor is to be congratulated on the non-recurrence of club feet. Almost all men admit that they do have recurrence of the clubbing. That is probably because it has not been properly corrected in the first place, or the treatment has not been pursued for a long enough time. I think the time element has a great deal to do with it. I do not think you can accomplish rapid cure of club feet, because it takes a certain amount of time for the bones to mold to the proper shape and position.

In making an x-ray of club feet, or any other x-ray on a child of that age, you see only the centers of ossification of the bones. You have very little bony structure to deal with, and it seems to me that it is entirely futile to do a bone operation at that time. I think if these cases are gotten at once and given the proper attention for correction, and properly retained, you get a very good result. I think the best functioning feet I have seen were the result of being held in position by adhesive strapping and mechanical apparatus.

DR. OSCAR T. SCAMAHORN (Pittsboro): I have a son who was born with club feet. He was born about one o'clock in the morning, and about ten o'clock that same morning I had him up to Dr. Allen and he put him in a brace. He took a piece of silver wire and molded it after the fashion of this large brace, and with adhesive strapped the foot into the position he wanted. About every two weeks this boy had his brace changed. He wore this brace about five months, and he began to walk at thirteen months. He is as active as any boy.

DR. H. R. ALLEN (closing): One point I want you to bear in mind is that I never touch the bones in correcting a club foot regardless of age or other conditions. You do not have to touch the bone to correct club feet. If you want your patient to be comfortable after the operation, overdo the correction while you are operating. What you gain during the operation you will maintain mechanically afterwards, but what is not gained and not maintained the patient will not get during his lifetime. So do your work thoroughly, put the foot in the position in which it belongs, and hold it there with the retention brace.

SEPTIC INFECTION FOLLOWING ABORTION OR DELIVERY*

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These notes being in no sense a paper or treatise on the subject, I shall at once present for your criticism my method of treating septic infection following abortion or term delivery.

Successful treatment depends upon a careful study and correlation of certain diagnostic points, as follows: (1) Past history, especially as to previous pelvic disease, gonorrhea, lues, malaria, typhoid, etc. (2) Is the present infection an acute flare-up of a chronic condition, or an acute primary infection? (3) Patient's condition during pregnancy.

STATUS PRAESENS—(1) Focal infections, (2) possible causative factors, (3) time of appearance and type of symptoms, (4) pulse and temperature. Rectal temperature only is reliable. One not infrequently sees a variance of from two to four degrees between mouth and rectal readings. Special attention should be paid to the relationship between pulse rate and temperature curve. A high temperature unassociated with an appreciable increased pulse rate is not in my experience as of serious import as a rapid, bounding pulse, regardless of temperature. (5) Abdominal distention, tenderness, pain, localized or ascending peritonitis. (6) General systemic reaction. Blood pressure curve, urinalysis, etc.

LOCAL EXAMINATIONS—1. Character of vaginal discharge. An absence of, or scanty, discharge may lull us into a false sense of security. 2. Is cervical os patulous or contracted? Degree of drainage therefrom. 3. Is uterine body involuted or not? 4. Is the uterus empty or not? 5. Has the infection passed the confines of this organ and involved the pelvic lymphatics, adnexa or cellular tissues?

LABORATORY FINDINGS:—1. Blood cell count, coagulation time, etc. 2. Blood culture and smears. 3. Smears and culture of local discharges.

*Presented before Section on Surgery of the Indiana State Medical Association, Indianapolis Session, September, 1921.

Pardon me if I appear too emphatic in again reiterating that a careful correlation of the foregoing points frequently makes for the difference between successful and unsuccessful treatment. For example, undervaluation of the patient's constitutional reaction has led to the performance of certain seemingly indicated local measures which had better have been left undone.

If examination leads to the conclusion that the infection has passed the bounds of the uterus, and pelvic structures are involved, there is more or less progressing peritonitis and undoubted constitutional involvement, *i. e.*, bacteremia, septicemia or pyemia—I feel that any local major operation is of little avail. At most (?) a careful removal of free material from the uterus may be permitted, and if indicated some method used to promote free drainage, but hysterectomy or any other intra-abdominal interference is unwarranted, for the patient is now suffering from a disseminated systemic poisoning, the infection having passed far beyond the confines of its initial implantation site, and any involved operative manipulation tends to hasten rather than to retard a fatal outcome. Of course if there is free pus in the pelvis, colpotomy should be done and drainage established. However, in general, our best hope for such cases is in proper constitutional measures, as outlined further on.

LOCAL MEASURES:—If local interference is indicated, the following is my usual course, modified to meet individual indications: The patient is sent to the hospital if not already there. These cases cannot as a rule be handled satisfactorily otherwise. No other alimentary cleansing besides colon flushing is ordered. Blood, for count and culture, and specimens of genital discharges are taken for smear and culture, and urine is sent to laboratory. The following proctoclysis: Sodii salisylas gr. xxx-xl; sodii bicarb. and glucose of each ounces i-ii; normal salt sol. ounces xxiv-xxx, is at once begun and continued until patient is removed to surgery. Patient is prepared in usual way for vaginal operation. For some years I have discarded the pre-anesthetic administration of morphine and have given in its stead chloretone gr. x-xv per mouth. The anesthetic of choice, if any is given, is nitrous oxide and oxygen. The cervical canal is carefully dilated and a uterine sound introduced for purpose of demonstrating the length and relative direction of the cavity. It has been my fortune to have seen, as have doubtlessly most of you, a number of perforated uteri, due to failure of the operator to assure himself as to this before recklessly gouging, scraping or pulling on tissue. A tonsil sponge forceps, or similarly blunt instrument, is used to remove all free material. No effort is made to remove adherent masses, *nor is the uterine curette ever*

introduced. A uterine applicator forceps covered with gauze or tape, and saturated with 50 percent tr. iodine in alcohol solution, is used to gently but thoroughly swab the entire uterine cavity. If the case is of the mild type, and I feel reasonably certain that the uterus is empty, nothing further is done. The patient is given 1 cc. obstetric pituitrin or some form of ergot hypodermatically, and returned to bed. If the type is moderately severe, or there is probability of unremoved free or adherent material, the cavity is packed with gauze saturated with 50 percent tr. iodine in alcohol solution, to be removed in 24 hours. I have yet to find this fail to take care of any retained material, it usually being expelled 24 to 36 hours after removal of the packing, without any untoward symptoms in the meantime. If the condition is more severe, and there is found a fetid or purulent discharge, necrotic secundes or phlegmons, a fenestrated soft rubber tube is introduced well into the uterine cavity, and sutured to the labium. The tube should protrude sufficiently from the ostum vagina to permit attachment of irrigating tip without removal of vaginal pad, through an opening in which the tube has been carried.

POST-OPERATIVE TREATMENT:—The patient is placed in bed with the head-end sufficiently elevated to aid uterine drainage. As soon as considered safe, she is placed in the modified Fowler position. I believe this is superior to the prone position, favoring as it does free drainage, and preventing the possible reabsorption of toxic material from accumulated discharges. Proctoclysis is immediately begun as per before mentioned formula. If the bowel is intolerant, hypodermoclysis of soda and normal salt solution, or normal salt solution intravenously, is given. I think this is of inestimable therapeutic value for it replaces lost body fluid; to some extent at least, allays thirst; dilutes toxins; neutralizes acidosis; reduces or frequently abolishes post-anesthetic discomfort; and acts as a food. If the general picture of the case leads to the belief that the infection is of the streptococcus type, I do not wait for smear or culture reports, but immediately give 50 cc. polyvalent antistreptococcus serum intravenously by preference, and repeat as indicated in 12 to 18 hours. If this serum is not obtainable like quantities of normal horse serum are given. I might say that I have seen some very pleasing results, not only in cases of this type but in non-puerperal acute pelvic inflammations, especially where the gonococcus seemed to be the determining factor, follow the use of normal horse serum. Whether or not the effect of serum injection depends upon the specificity of the serum used, or upon a general cell protein-splitting ability, thus promoting anti-body formation, I do not presume to say, but my own experience seems to bear out the latter hypothesis. On occasion when serums were not obtainable, I have resorted to the intravenous injection of 30 grains of chemically pure sodium iodide in 20 to 30 cc. dilutions, repeated at appropriate intervals, with seemingly satisfactory but slower results.

In my humble opinion the very best of all intravenous procedure is blood transfusion. Two hundred to 300 cc. of the patient's blood is withdrawn, if her general condition does not too strongly contraindicate, and replaced by an average of about 700 cc. of donor's blood. I believe the withdrawal of some of the patient's toxic blood is for obvious reasons good practice.

Ice-bags are applied to the lower abdomen, or hot bags when cold is not well borne, and while either one may allay pain by reflex action, I am frank to state that it is to me an unsolved problem, whether the application of either heat or cold to the external abdominal surface exerts any specific influence upon the actual pathology of an intra-abdominal condition. I have made some experiments by applying water-bags at ordinary body temperature, sand-bags or shot-bags of like weight, and have about come to the conclusion that the good effects are the result of the bags acting as splints, and the retention of their position *in situ* enforcing body repose, rather than to an ability to cause any rapid change of volume or temperature from the superficial abdominal parietal to the deep visceral or pelvic circulation; or to any direct action upon the visceral structures involved, which in view of anatomical relationships seems doubtful.

If a retention tube has been introduced, the nurse is instructed to irrigate at 3 to 4 hourly intervals, one pint of equal parts of alcohol and sterile water (if alcohol is obtainable), or next best one to two drachms of tr. iodine to the pint of water. Hypertonic salt solution has also proven of much value. These three agents however have given me more satisfaction than any other solution tried.

Ergot in some form and appropriate dosage up to 60 minims by mouth is given three to four times daily for some days, as I feel the resultant uterine contractions aid in the expulsion of retained material or formed exudates and the closure of sinuses tends to prevent continued introduction of septic material into the circulation.

For pelvic or diffuse peritonitis, the remedy par excellence in my hands is opium, in the form of rectal suppositories, used as high as half grain doses at three to four hourly intervals; and knowing that I lay myself open to much adverse criticism I nevertheless maintain that opium for peritonitis and acute pelvic inflammation is well-nigh as specific as quinine for malaria. The argument that it does harm

by drying up secretions, etc., does not hold good, especially not when copious procto- or hypodermoclysis is used.

Other appropriate constitutional therapeusis is used according to the individual case, although I find that natural salicylate of soda in gr. xv doses from one to three hourly intervals combined with bicarbonate of soda, or the following combination: Hydrarg. chlor. corros. gr. 1/48—1/30, Fowler's sol. mm. iii, tr. ferri chlor. min. iii-v, tr. nux vomic. min. v-x, given about four times daily, meets the usual requirements.

I have not missed the internal administration of alcohol, and feel its value has been greatly overestimated. However this does not mean that I would not use it, for it has its value, though no more so than other stimulants which can be used.

Time prevents me from entering into a more detailed explanation of each step of the method I follow, feeling that the reason therefor and the result expected are self-evident. Also, it must always be remembered that individualism is the keynote of successful treatment in every case, therefore the above outline must be adapted to meet specific indications.

A differential diagnosis is occasionally as difficult as it is important, *i. e.*, I have known of cases in which needless curettage, etc., and in one instance hysterectomy was done, where further careful study of the cases showed lues, malaria, typhoid, acute tonsillitis, etc. My method of treating these infections may, as a whole or in part, meet with the decided disapproval of many of my friends whose opinion and judgment I value highly; but in view of the fact that no claim as to originality is made, I may state without fear of being misunderstood that, after following it for some fifteen years or more, it has proven most valuable to me.

In conclusion may I submit two recent cases which concisely demonstrate the above outlined method of treatment:

Case I:—Mrs. F. C., native of Spain, 36 years old, married 18 years. First seen by me in consultation with Dr. L. Witt, March 15, 1921. Past history: Negative as to the usual diseases of childhood. Gives history of having had malaria in years past. Mother of seven children. No previous troubles in confinements. Three children died at various periods after birth. Three months before the birth of her last child, which occurred March 9, 1921, she complained of soreness in the region of gall-bladder. Patient began labor at 2 or 3 a. m., March 9th. Membranes ruptured spontaneously about 6 or 7 a. m. Her physician states she had a dry labor, and was delivered without forceps about midnight of March 9th. No laceration. Placenta expressed about 20 minutes later intact. Patient seemed normal until 11 p. m. March 10th, when she had a chill, and developed a pain in the upper left side. On the morning of March 11th her temperature was 101 per mouth, pulse 90. She had a very severe pain in region of gall-bladder, in mammary line on level of ninth rib, and under right scapula. By afternoon of March 11th pain subsided, but temperature continued 101 in morning and 102 at night with pulse of 90 to 100, until the morning of March 15th, when she had another chill.

She was first seen by me about 11 a. m. of this day. Facial expression worried; skin pallid and leaky; tongue coated; breath fetid; temperature 100.2 per mouth, 104 per rectum; pulse 100 bounding; blood pressure, systolic 160, diastolic 90. Nose, throat and teeth, seemingly normal. Lungs and heart negative. Liver and gall-bladder seemingly negative. Abdomen slightly distended. Pain and tenderness negative above umbilical line, quite tender in pelvic region. Vaginal examination: Very scant, yellowish discharge, some odor. Perineal scar from previous third degree laceration. No recent tear. Cystocele and rectocele. Cervix shows evidence of old bilateral laceration. Cervical os contracted. Uterine body boggy, subinvoluted and tender. Adnexa and pelvic cellular tissue congested and tender.

Patient was removed to the Methodist Hospital, reaching there about 3 p. m., at which time her rectal temperature was 107, pulse 140. She was prepared for the surgery and operated at 5 p. m. in the usual manner. The uterine cavity measured six inches. Only a few shreds of secundes were found, but a number of masses of necrotic uterine tissue, some as large as one inch in diameter were removed. The cavity was swabbed with 50 percent tr. iodine in alcohol solution. A fenestrated rubber tube was introduced and attached by suture to the labium. The patient was returned to her bed, and the usual post-operative continuous proctoclysis, with the addition of 60 gr. salicylate of soda was at once begun. Fifty cc. anti-streptococcus serum were given intravenously, and repeated the next morning, March 16th, at 9 a. m.

The temperature curve is interesting. On March 15, 6 p. m., after return from surgery, the rectal temperature was 108, and then gradually receded until by 3 p. m. March 18, it was 99 rectal. It remained so until 6 p. m. of March 20, when without any warning her general condition having been very good, she had a chill and the temperature rose to 106 rectal. In view of the fact that she had a past history of malaria, previous medication was stopped, and quinine given, after blood had been taken for examination. This and a number of other examinations for plasmodia were unsatisfactory, although it was thought by one examiner that there were some bodies noted which might be

plasmodia. By March 21st the temperature was again normal and remained so until March 28, on which afternoon it again shot up to 102 4/5 and ran a variable course, never over this, until April 4, when it became normal and remained so.

The laboratory findings in this case were disappointing. I owe much thanks to Dr. Warvel for his painstaking efforts, but repeated blood and local discharge cultures and smears were negative. The white cell count also was interesting. When the patient entered the hospital the white cell count was only about 6,000, and at no time, in spite of the rather stormy clinical picture, was there a count above 18,000.

The post-operative treatment was as outlined in the above notes. At this writing I am informed that the patient is apparently well.

Case II.—Mrs. M. S., aged 22 years, American. Married 4 years. First seen in consultation with Dr. Geo. Bowman, June 18, 1921. Past history: Usual diseases of childhood. No after effects. Also has had diphtheria and attacks of acute tonsillitis. None recently. Catamenia began at 14 years. Always irregular but not painful. Married at age of 18 years. Mother of two living children; the youngest 16 months old, still nursing at breast. Had one miscarriage between first and second term delivery. About June 8, 1921, the nursing child, while at the breast, bit her about an inch to the left of the right nipple. The area has been painful since. History of present illness: On the morning of June 15, 1921, without any known reason she aborted, passing as was thought all the products of conception. The family think the pregnancy was about 3 months, but are not certain as she had not menstruated since birth of last child. Being inclined towards the Christian Science persuasion, no physician was called. She continued to bleed without intermission, when on June 18, 1921, about 10 a. m., she had a prolonged chill and "sinking spell". About 4 or 5 p. m. her condition became such that Dr. Geo. Bowman was called. He saw her at about 5:30 p. m. At this time there seemed to be no active bleeding from the vagina, and as he does not handle obstetric cases, he simply applied restoratives, made no digital examination, and invited me to see the case.

I saw the case with Dr. Bowman about 7 p. m. June 18, 1921. Status præsens: The patient is a well nourished young woman. Her face is pallid; lips lemon color; pulse 120, irregular; temp. 101, rectal; skin cold and leaky; she is restless, seemingly irrational, and at times semi-comatose. She has the appearance of shock. General physical examination: Heart and lungs negative. Systolic blood pressure, 140, diastolic 90. A red area about one-quarter inch in diameter is noticed on the right breast about an inch to the left of nipple. The patient seems to react when this area is pressed, but there is no palpable tumifaction. The abdomen is slightly distended and somewhat tympanitic, but seemingly not painful. Vaginal examination: A thin, bloody exudate is noticed at the vaginal orifice, which is relaxed. Digitally there is felt a relaxed, scarred perineum. A number of odoriferous clots are found and removed from the vagina. The cervical os is dilated about half an inch, and presents a hard fibrous margin. The cervix itself is bilaterally lacerated. There is presenting at the cervical os a mass, presumably placenta. The uterine fundus is soft and distended to about an inch of the umbilicus. Further bimanual examination is negative. The patient shows no reaction to digital examination, as she is practically unconscious.

After considerable urging the family consented to her removal to the Methodist Hospital. She reached there about 9 p. m., and the usual pre-operative procedure was followed. Blood examination: Red blood cells 2,064,000, white blood cells 27,600, poly. 87 percent, small 11 percent, large 2 percent. Urinalysis: Albumen, plus one; otherwise negative. Husband's and two other individuals' blood proved incompatable for transfusion. Vaginal smears: Negative for G. C. The patient's condition at this time was so desperate that it was a problem whether local interference would be of any avail. She was given an intravenous of normal salt solution, and camphorated oil hypodermatically, and reacted sufficiently that by midnight it was deemed safe to proceed. Pulse was 160, temp. 99.2 axillary (so taken on account of proctoclysis). Under very light gas and oxygen narcosis (because of restlessness) a non-adherent placenta of 2½ or 3 months development, and a number of large odorous clots were removed from the uterine cavity, which was then swabbed with 50 percent tr. iodine in alcohol solution, and firmly packed with gauze saturated with similar solution. One cc. of obstetric pituitrin was given and the patient removed to her bed. It might be stated here that there was no further uterine hemorrhage. The usual post-operative method was followed. June 19, 1921, 6 a. m., temp. was 100 3/5 rectal; pulse 164; pupils slightly dilated, and patient comatose. Condition critical. June 19, 6 p. m., temp. 102 rectal; pulse 130. General condition unchanged. June 20, 6 a. m., temp. 100 3/5 rectal; pulse 120. Patient restless, but seemingly unconscious of her surroundings. Uterine pack removed, no bleeding. Blood examination report: Hemaglob. 24 percent, red blood cells 1,712,000, color index .7, white blood cells 27,000, poly. 86 percent, small 10 percent, large 2 percent, trans. 1 percent. Quite a few nucleated red blood cells. Polychromatophilia. At 2:30 p. m. of this day she had a chill. Temp. 103 3/5 rectal, pulse 120

and bounding. Patient still unresponsive. At 5:30 p. m., temp. 104 rectal; pulse 118. We had been making effort to obtain a suitable blood donor, and late that evening were successful in finding one in the person of a young woman who weighed about 80 pounds, claimed to be 18 years, but looked about 14 years old. By 3 a. m., June 21, temp. 107 6/10 rectal, pulse 162. A blood transfusion (citrate of sodium method) was begun, but after about 200 cc. of blood had been drawn from the donor, she unfortunately collapsed, and no more blood was obtainable. However, this amount was given to the patient. June 21, 6 a. m., temp. 101 4/5 rectal, pulse 112. Blood examination report: Hemaglob. 25 percent, red blood cells 1,932,000, white blood cells 35,800, poly. 95 percent, small 2 percent, large 3 percent. At 6 p. m., temp. 101 4/5 rectal, pulse 100. June 22, 6 a. m., temp. 101 4/5 rectal, pulse 88.

At this time, four days after entering the hospital, the patient was conscious and seemingly rational, and stated she had no recollection of having seen me before and did not remember anything that occurred since about noon of Saturday, June 18. From this time on the temperature did not rise above 102 rectal, nor the pulse above 115, and by June 29, temperature and pulse became normal and remained so thereafter.

On June 23 the reddened area on breast became more painful, and a distinct tumifaction was noticed. On June 24 this had enlarged, fluctuated, and about noon ruptured spontaneously, evacuating—according to nurse's report—a pint or more of foul-smelling yellow pus. Microscopic report: Mixed strepto- and staphylococcus, strepto predominating. The abscess cavity was packed with hypertonic salt solution saturated gauze, and by June 29 the discharge had stopped, and the wound was practically healed.

The blood examinations for June 23, 24, 25 and 29 were as follows: June 23: Hemaglob. 25 percent, red blood cells 1,360,000, white blood cells 18,000. June 24: Hemaglob. 26 percent, red blood cells 1,760,000, white blood cells 16,000. June 25: Hemaglob. 26 percent, red blood cells 1,664,000, white blood cells 19,200. June 29: Hemaglob. 35 percent, red blood cells 1,768,000, white blood cells 10,000. June 23, report on blood culture, negative after 72 hours. Vaginal discharge, negative after 72 hours.

The patient was able to leave the hospital June 30, 1921, and at this time has fully recovered.

I am frank to state that I consider both of these cases somewhat atypical, for in case No. 1 the question arises, in view of a past history of malarial fever, whether the hypertherma was malarial or not, and in case No. 2 whether the sepsis was primarily genital or from the breast.

430 Bankers Trust Bldg.

DISCUSSION

DR. JOSEPH H. WEINSTEIN (Terre Haute): We have two distinct schools in this condition. One idea is to leave them alone in every instance; the other is always ready to do something, perhaps too often.

I think one very, very important thing that is not infrequently overlooked is the previous history—to know whether the infection is primarily puerperal, or gonorrheal in origin. Of course if it is gonorrheal in origin we are much safer in any operative procedure than if it were puerperal. These cases are fairly safe if they are left long enough. Frequently they cannot be reached from below, even though a fair quantity of pus may be present at some place, and entering the abdomen early is usually fatal.

Pulse and temperature are extremely important. We may have a case with a fairly high temperature, but if the cardiac condition is satisfactory I think we can safely wait on this case, and with the expectant treatment we will get better results. We cannot always tell whether the uterus is empty in any of these cases. They frequently will retain vile smelling clots and there will be no secundines present at all. The cervix may be contracted, retaining the clots, which will decompose and produce symptoms in the same way as retained placenta or the product of conception. So I do not subscribe to the school that believes in letting things alone too long. If the case does not respond fairly early, I can see no harm in very carefully dilating the cervix, as Dr. Jaeger says, never using the curette. We can use a wire pool, a sponge forceps, or something like that, which will do no harm to the uterus and will not open up any new avenues of absorption.

I think it is extremely important to determine the extent of the infection. If we have a peritonitis and infection is outside of the uterus and has entered the general system, then we have a septicemia, and I cannot conceive what good any surgical procedure is going to do outside of being certain that we have drainage of the uterus—that is, outside of general treatment that should be instituted.

In the case the doctor spoke of, in an anemic condition from whatever cause, transfusion is absolutely indicated; but in the average case I should hardly think that necessary although hypodermoclysis or proctoclysis would be indicated. The Fowler position and hypodermoclysis has done more than any other two measures towards curing these cases of infection.

I do not like to use irrigation of the uterus at any time, whether on the operating table or during the after treatment. I really do not believe it is necessary to use a tube in the uterus.

I think with the cervix thoroughly dilated you will have sufficient drainage, especially if pituitrin is given and that is followed by some tonic treatment with iron, nux and ergot.

I was much interested in the remarks of the doctor about the experiment with shot bags, etc. I never heard the matter presented in that way before, and there may possibly be something in it, if it acts as a splint to the abdomen, the same as morphine or opium acts as a splint internally.

DR. G. FRANK HOLLAND (Bloomington): I imagine this is the method followed by most of us in the care of these cases, especially those with immediate signs of infection. I have not used a sharp curette in these cases for a great many years, using iodine and plain gauze. I do not use the tube; I do not use irrigation in clearing out a uterus. Many times in the first hours of signs of infection we may be able to get sufficient dilatation to permit the removal of secundines with the index finger. I prefer blunt forceps, because you can much better differentiate that portion to which it is adherent and avoid greater physical damage to the uterus already infected and soft. In fact, I wonder sometimes at the success of the man who uses a sharp uterine curette. I congratulate him, because it is almost equivalent to scraping the inside of a wet paper bag.

External infections are found, many times, with rapid pulse, high temperature and increased pressure. I remember one case of diphtheria of a very slight tear in the perineum. The case had already been curetted and was found to be a local infection of the rent.

One of the problems of these tube cases that comes to all of us is the fact that so frequently you will find the doctor blamed as the cause of the sepsis in the case. In the case cited by Dr. Jaeger it could not have been attributed to that, but in many cases they say the doctor did not give the right care. They fail to consider the almost uniformly poor care given obstetric cases in the home. You will not find this type of infection so common in the hospitals. As you know, where there is a miscarriage there is no preparation and almost anyone is called in to assist. They are often the source of infection.

DR. A. S. JAEGER (closing): The reason I took this subject for discussion is because I believe it is at present of great importance and I do not think there have ever been so many cases of septic infection resulting from premeditated or accidental abortion, or miscarriage, as within the last five years. We can readily see how this has happened as a result of wartime infatuations and of hasty marriages, and many parties to such have taken the law into their own hands as to how many children they shall or shall not have. As a result of present economic conditions we will get such cases more frequently for some time to come and we must decide what is the most rational treatment to pursue.

I believe Dr. Weinstein misunderstood me. I do not use blood transfusions only when the patient is *in extremis* because I believe that introducing new antibody formation factors directly from healthy human blood will more rapidly than any other means stimulate in the recipient's body an ability to overcome the infection.

I do not use the tube in every case, but only where it is absolutely needed, because in these cases I cease to feel that I am dealing simply with a uterus, but rather with an infected cavity, and I want the infective material washed and drained out. It is not imperative to use irrigation through the tube, but if there is contraction of the cervix without adequate provision for drainage one may have trouble.

Another interesting fact is this: In the last three months in my City Hospital service I have had considerably more than the usual number of acute inflammatory pelvic cases. Unfortunately our drug clerk was ill and not being able always to procure suppositories we had a chance to decide the difference between our opium combination in the rectum and morphine hypodermically. In the cases in which we were able to use suppositories, the patients were practically well in two or three weeks. In the case where we used morphine it took five or six weeks to obtain the same result.

NON-TUBERCULOUS INFECTIONS OF THE KIDNEY*

P. E. McCOWN, M.D.
INDIANAPOLIS

Much has been written on pus infections of the kidney, but the importance of the renal function to the body economy is so great that we hope another contribution on this subject will be of interest.

The difficulties of diagnosis without instrumental examination are sometimes unsurmountable. However, if kidney disease is suspected, in most cases it will be easy to arrive at the truth by ordinary methods. If early diagnosis is made and the proper treatment instituted more kidneys will be saved from total destruction.

The kidney as an excretory organ is of necessity affected by the general diseases of the body. Infections of the nose, throat, apical abscesses of the teeth, appendicitis and intestinal fermentation or any non-draining focalized infection give up bacteria and toxins which are at least partially eliminated through the renal tubules.

(1) *Exciting causes*:

(a) Mobility. Kidneys loose in the abdomen receive more or less traumatism in addition to the embarrassment of their blood supply

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by the twisting of the pedicle, and furthermore by ureter kink, checking the free drainage of urine.

(b) Likewise external traumatism will lower the resistance of the corticle and pelvic portion of the kidney to the point of permitting the growth of bacteria.

(c) General debility. It is a well established fact the normal kidney will pass numbers of pathogenic bacteria through its tubules with no ill effect to its tissue. Debilitating diseases so reduce the functioning power and resistance of the kidneys as to make them very susceptible to pathogenic organisms.

(2) *Bacterial causes*:

(Scheidemantel Muench. Md. Wochenschr. 1913, Page 1722.)

Scheidemantel found in the examining of one hundred mild to moderately severe cases the bacterial cause to be colon or colon-like bacilli 84, bacillus-proteus 3, para-typhoid 1, influenza 2, diplococcus 1, staphylococcus 2, mixed colon and coccus 4, streptococcus 2, pyocyaneous 1. We find our own cases run very close to this percentage, except that we have had two cases of pyocyaneous and several cases of streptococcus infection.

The men who have studied the source of infection in the kidney are coming more and more to believe the blood stream is the vehicle of most infections. Since blood culture has been more extensively used this has been emphasized, for we have been able to demonstrate in the blood the same organism that is cultured from the original source of infection, and from the catheterized kidney urine.

The kidneys are richly supplied with lymphatics and have a fairly definite chain communicating with the ascending and descending colon as shown by Franke (Grenzgeb, d. Med. u. Chir. 1911 XXII, 623), but it seems that the lymphatic flow is from the kidney instead of toward it.

Eisendrath, of Chicago, worked out a chain of ureteral lymphatics ascending from the bladder to the kidney, but Cabot and Crabtree examining the same sections believe that this chain was not direct to the kidney, but drained into glands external to the ureteral walls. Thus it would not seem likely that the kidneys would easily receive infection through their lymphatic channels.

The question of infection ascending from the bladder through the lumen of the ureter has been debated pro and con for many years. It has been shown as quite unlikely in normal ureters for bacteria to progress against the downward flow of urine. However, in the presence of urethral stricture, enlarged prostate or other causes which produce an increased intra-bladder pressure it would seem possible for the ureters to dilate and lose the vermicular expulsive wave normally found. We have a slide which demonstrates this condition. The urine from this dilated ureter was sterile and the man went through a prostatic operation without kidney infection, but it is our opinion that the colon-bacilli in the bladder would have invaded the ureter and advanced eventually to the kidney, had not the bladder neck obstruction been removed. Keyes in his Urology, very strongly insists that ascending infection is improbable, preferring to believe that the prostatic or bladder infection is carried by the lymphatics into the blood stream and re-excreted by the kidneys.

One other source of infection to the kidney is that of irruption from neighboring organs, such as diaphragmatic or hepatic abscess. These, of course, are rare.

Briefly the pathology of kidney infection is that of reddening, inflammation, congestion and swelling of the tubules and mucus membranes. The coccus infections seem to show predilection for the corticle portion of the kidney, while the colon bacilli are usually found in the pelvis and about the papillæ, each producing abscesses which eventually coalesce and empty into the pelvis. We hope to demonstrate by our lantern slides the various degrees of kidney change produced by these infections.

The symptoms of this disease are many, varied and often misleading. In the mild cases we may have frequency and possibly a burning upon urination, general malaise, loss of appetite, with none or a very small rise of temperature. These symptoms may be absent and the patient merely complains of a foul, turbid urine or a urinary sediment. Examination of such a urine specimen may show pus or only a large number of bacteria. The specific gravity is usually low. Pain or aching in the loin may be the only symptom, however, it will be well to discount the numerous other causes of backache by making an urinalysis.

We have recently had two cases who came because of symptoms of urethritis. In determining the cause of urethritis urinalysis was made and evidence of kidney disease found. The beginning of the kidney infection may be masked by the symptoms of such other diseases as tonsillitis, scarlet fever, typhoid, etc. Thus it would seem well to examine the urine occasionally during general infectious diseases without waiting for some specific indication.

In moderate to severe types there may be a sharp rise in temperature, and this frequently happens as the symptoms of the general disease are subsiding, leading one to suspect an extension or exacerbation of the tonsillitis, scarlet fever or typhoid fever. At this stage you should palpate the loins for tenderness and make an urinalysis. The temperature curve is irregular and may be interrupted by intense chills. In the very severe cases these chills may be as frequent as two or three times a day, racking the

heart and leaving the patient exhausted. The sub-costal pain is usually severe, but in rare cases that may be entirely absent, or vary with the degree of intensity of infection.

Pyelitis in infancy and childhood is more common than generally suspected. Danforth (S. G. & O. March 1920 XXX No. 3) speaking of the experience of the Gynecologic-Obstetric service of the Evanston hospital, makes the following statement: "The number of instances in which pus has been found in the urine of infants a few days old has been striking. It seems fair to assume that many unrecognized and therefore untreated infections of the kidney may be the starting point for urinary lesions of a more serious character in later life, and it is suggested that a careful routine observation of urinary findings during the first week of life in maternity hospitals and the active routine treatment of urinary infections revealed thereby would serve as a preventative measure of considerable value."

The onset is usually sudden and we find the child restless, flushed and feverish. There is rapid loss of strength and weight. The temperature curve shows all variations. If old enough, they will complain of abdominal pain, frequency and pain on urination. The urine will be of low specific gravity and show varying quantities of pus, the extreme cases will show a very high temperature, followed with prostration and death.

The common occurrence of pyelitis in pregnancy would seem to merit some discussion of the symptom syndrome in this condition. It is not uncommon to ascribe the urinary frequency in pregnant women to the growing tumor, or to the nervous and frequently unhappy condition of these patients. Pain in the loin is usually a prominent symptom even in the milder infections and should be an indication for a careful urinary examination. Urinalysis in women is of little value unless it is of a specimen catheterized directly from the bladder. It is well to remember that there may be no urinary symptoms, but should the bladder be involved with kidney infection the act of voiding may be very frequent or almost continuous. The general symptoms of temperature, chills and sweats will vary with the degree of the intensity of the infection. In this form of pyelitis as in other types there may be a complete closure of the ureter and temporarily there will be no pus found on urinalysis. This has occurred several times in our practice and in one notable instance of a woman of seven months' pregnancy there was a large abdominal tumor of the right side, which pushed the fundus of the uterus beyond the mid-line. Urinalysis in this case showed a small amount of albumin in clear urine, a few blood cells, and a few hyaline casts. This urine was later found to be coming from the left kidney. By cystoscopy and ureteral catheterization we withdrew in twelve hours sixty-eight ounces of thick purulent urine from the right kidney, and had a complete subsidence of the right sided tumor formation. While in this case the temperature was not high, yet we have had several patients in the last few months that when the ureter block came on, the temperature rose to 105 and in one instance to 107. There may be no urinary frequency or burning in this condition, in fact the diagnosis may be extremely difficult, as the pain may not be in some instances proportionate to the gravity of the condition. Ureter blocks may present all the dramatic symptoms of the so-called acute abdomen, and it will require a fine degree of discrimination of the surgeon to accurately diagnose it. In fact we are coming in contact with cases who have had appendices removed, gall-bladders drained and every other manner of abdominal operations performed without relief in the presence of a kidney condition. It is well to remember in severe kidney diseases that we usually have a dry, red tongue, and in cases of extreme infectious toxemia we have seen vomiting frequently occur. Increasing drowsiness, hiccough, coma and convulsions may be the terminal symptoms.

Renal infection should be suspected in the presence of fever and toxic symptoms with obscure cause, especially if a pyuria or bacteriuria exist. Backache should be thoroughly investigated with the idea of the possibility of kidney disease, always remembering that the urinalysis may not show much in the way of pus in the beginning condition, or should there be ureter block. In the physical examination always palpate the loin in the endeavor to evoke tenderness in the costa-vertebral angle.

Deep abdominal palpation with counter pressure in the loin often discloses a large and tender kidney or a dilated pelvis full of pus. The pain of this condition may be present in the plane of the gall bladder on either side. It may be referred to a level of the appendix on either side or, as is well known, may radiate from the kidney along the course of the ureter into the testicle and inner side of the thigh.

In renal infection the urine will show a disproportionately large amount of albumin relative to the number of casts. Pus cells or bacteria will usually be found. It may be regarded as axiomatic that pus with a large amount of albumin with few or no casts indicates renal infection. Pus may not be found: (1) In very slight renal infection, (2) in the hyperacute focal suppuration pus may not be delivered into the kidney pelvis, in other words we have a true kidney suppression, which may be partial or total; (3) inflammation may block the ureter withholding pus temporarily or permanently from the bladder urine. In the latter two conditions we may have all the symptoms of the acute abdomen and the diagnosis cannot be made certain without the use of a cystoscope and ureter catheter. Such an examination will

show whether there is pus in either kidney urine, whether there is obstruction in either ureter, and if the catheters pass freely to the kidney we can demonstrate the quantity of urine excreted by each, the quantity of urea eliminated by each and the ability of the kidney to eliminate phenol-sulphone-phthalein or other diagnostic dyes. These tests are usually successfully made, even though the catheter enters the ureter but a few centimeters.

The x-ray combined with ureteral catheterization has been of an inestimable value for discovering stones and the degree of destruction in the diseased kidney. It also discloses to us displacement of the kidneys, stricture of the ureters, kinks and other distrophies found associated with and causing kidney infection. We hope to illustrate the advantage of combined ureter catheterization and x-ray examination by our lantern slides.

Cystoscopy and ureter catheterization is the best method for finding the source of pus in the urine. We can segregate the infected urine from one or both kidneys and differentiate it from simple cystitis, prostatitis or seminal vesiculitis. It is also obvious that this is the best method of differentiating kidney disease from other abdominal affections.

Favorable prognosis in these conditions depends to a great extent on early recognition of the disease and the institution of proper methods of treatment. Failure in this respect brings on the severe destructive lesion which necessitates sacrificing the kidney. Even in the presence of ureter kink or stricture we are frequently able to re-establish good drainage from the kidney and secure a return of function, with an abatement of the infection. In bilateral pyelo-nephritis the prognosis is more grave. However, in this condition we have several cases which, with kidney lavage and hygienic treatment, and internal medication, we seem to be able to keep in a fair degree of good health even in the presence of undilatable ureteral strictures and permanent kinks.

Diet and Hygiene. It is well to remember in kidney disease that heavy ingestion of food or considerable exercise adds to the load of a crippled organ. It would seem best to reduce the diet to a point only sufficient to maintain a comfortable existence. By this we mean a reduction of the total diet and not the entire elimination of the proteins. It is a good rule in most all urinary infections to prescribe the drinking of large quantities of water. In the matter of diet we may well be guided by the degree of kidney insufficiency and intensity of infection and fever. Keeping the skin warm and moist increases the elimination through this avenue and decreases the material the kidney would otherwise have to excrete and thus lessens its congestion.

Hexamethylamine thirty grains daily as an average dose, but varying with the age of the patient and the degree of intensity of the infection, should be administered. The coccus infections usually flourish in the alkaline urine, so the addition of acid sodium phosphate, thirty to sixty grains a day, or sodium benzoate, will increase the effectiveness of the hexamethylamine. Conversely, the colon bacillus flourishes in an acid urine and a short period of alkalinization will be of assistance to its destruction.

In our treatment we must not neglect the possible causes of renal infection. If it follows the contagious and infectious diseases as scarlet fever and typhoid fever, of course treatment for these conditions have been previously established. But if its origin is unknown we must search out and eradicate the diseased teeth and tonsils, we must dilate the urethral strictures, we must remove the obstructing prostatic growth or eradicate the infection of prostate and seminal vesicles. Colitis and rectal abscesses and infection must be properly treated.

Congenital atresia of the urethra and ureter will require dilatation. A diverticulum can compress the ureter to the point of producing obstruction. We have recently removed such a diverticulum and will demonstrate by pyelogram the damage caused to the kidney and ureter.

Kidney lavage with the various solutions of vitillin silver or silver nitrate has been a great aid in the elimination of infection, mainly confined to the kidney pelvis and papillæ. The act of passing the ureter catheter or bouge, straightening kinks and dilating strictures or leaving a catheter in the ureter for hours at a time, has been of great assistance in relieving acute symptoms of high fever and toxemia.

It is possible to cystoscope children and there are instances of persistent infection, possibly aided by congenital atresia, which will be benefited by ureter catheterization and pelvis lavage.

Finally, in the fulminating cases where it is not possible to establish drainage of the kidney by ureter catheterization, nephrectomy or nephrotomy must be done. If at operation the kidney is found in bad condition extirpation is best, if the condition of the patient will permit an operation of such magnitude. In the very weak patients nephrotomy, with the establishment of drainage, and secondary nephrectomy may be a procedure of choice. Pyonephrotic cases especially with peri-nephritic abscesses will require a nephrectomy.

DISCUSSION

DR. CHARLES E. BARNETT (Fort Wayne): In the last portion of this thoroughly commendable paper the essayist speaks of the pyelitis of pregnancy. Had God known that we were going to get up on our "hind legs" he would have put a groove in the sacroiliac synchondrosis

sufficiently deep in the female to allow the ureters to bury themselves away from the pressure of the fetal head during pregnancy, thus avoiding subtotal ureteral block, or incomplete renal drainings. I have frequently made the statement that faulty drainage is the cause of nine-tenths of all disease.

One portion of the paper that is especially impressive is that showing Scheidemantel's statistics of 84 percent of bacillus coli infections. This tells me that the mucous membrane of the alimentary canal with its tributaries to other viscera contribute all but 16 percent of our infections—teeth, tonsils and all other infections only 16 percent. So a careful intake in the alimentary canal with thorough drainage would tend to eliminate 84 percent of kidney infections.

DR. BERNHARD ERDMAN (Indianapolis): It seems to me, as Dr. Barnett has said, that we all know this question of kidney infection is very largely that of all other renal infections—a question of drainage. These patients who have kidney infection have varying symptoms. Our greatest misfortune perhaps is that we see them too late. The instances of individuals who have kidney infection as a result of mechanical disturbance are quite numerous, and they can be taken care of by mechanical means, but the question of infection due to bacterial invasion is of the utmost importance.

I want to speak of these statistics of 84 percent of infections due to bacillus coli. You may say that bacillus coli is a rather common infecting organism. I believed it practically always present in acid urine until a few years ago when Dr. McDonald called attention to the use of large quantities of alkali, thus changing this reaction. This has been worked out very completely within the last few years by some of the men in the Brady Institute.

A well recognized procedure is lavage of the kidney pelvis, and attention to focal infections and intestinal tract infections is well recognized among those of us who do more or less of this work. But there are a few factors which I think should always be borne in mind. These individuals have almost invariably pus in the urine. There are exceptions, of course, where this pus is closed off temporarily. But a simple examination of the urine will, in a vast majority of instances, afford us a considerable amount of information. Frequently we have, in addition to the pus, bladder irritability and pain.

If the infection invades the kidney, it is questionable how much value we may get from lavage. We can lavage only the pelvis of the kidney. When we induce a solution into the kidney pelvis under such pressure as to bring about dissemination of the fluid within the mucous membrane itself, it is questionable whether we will benefit or damage that patient.

O'Conner, at the American Medical Association, brought out some interesting points in relation to the injection of substances into the kidney pelvis and allowed to remain a given length of time. The new dye substances we are getting hold out some advantage in the relief of kidney pelvis infection, but if these infections extend down into the substance of the kidney we will not get much benefit from these.

Attention to the patient's general physical condition is an important factor in the treatment of kidney infections as in other conditions.

DR. H. O. MERTZ (Indianapolis): Dr. McCown emphasized in his paper our ability to detect anatomical variations in the ureter and pelvis by means of the pyelogram. It is not necessary to reiterate the need for such findings in cases where we contemplate operation, but, as indicated in the discussion of this paper, there are problems involved at the other extreme meriting further emphasis. I refer principally to those factors which influence the localization of the infection in the kidney, and which tend to prolong the infection. The mass of the germ as we study it does not have to be large. It is the exciting factor in our infective process; but the thing that is predominant in a majority of these cases is the predisposing factor, that something which interferes with our drainage, and if we are going to study the problem with the idea of being able to forestall the development of a renal infection and accurately establish a rational procedure in the treatment of a renal infection, when once established, with the idea of limiting its progress or completely eradicating it, we must limit our discussion very largely to the subject of the causes of urinary stasis. If the stasis is sufficient that we can accurately detect residual urine by the ureteral catheter, our problem is simple. In the treatment of such cases I sometimes doubt whether one particular drug in the use of irrigation has any virtue over another. I think it is very much a problem of overcoming obstruction in the ureter. I recall one case in which ureteral catheterization had been employed for six weeks, because of a pyonephrosis associated with pregnancy, and there had been no irrigation of the pelvis except to dislodge pus and mucous from the catheter and the temperature remained normal throughout the course of this treatment. It was not the result of any medicine in the pelvis, as none was used, but the direct result of mechanical relief afforded by the relatively stiff catheter in the ureter.

It would seem the urinary stasis is a frequent cause of the localization of an infection in the kidney through its lessening local tissue resistance and it is equally true that urinary stasis is a frequent accompaniment of an established renal infection and no doubt materially contributes to its duration, and must be considered in formulating any plan of treatment.

DR. D. F. CAMERON (Fort Wayne): I would like to emphasize the rapidity with which the

contents of a kidney pelvis are absorbed when the ureter is occluded. In two and a half to three hours after a kidney pelvis has been filled experimentally with a sodium iodid or bromid solution as is used in pyelography and the ureter occluded, the contents of the pelvis remaining give no test for iodin or bromin. All of it has been absorbed and the test for the salt is positive in the urine secreted by the remaining kidney. Similar results are obtained when dyes and India ink suspension is used. This explains why there is such a febrile reaction in cases of pyelitis with poor drainage when the same infection in the bladder where there is practically no absorption produces little or no reaction.

Personally, I cannot understand why the use of solutions of silver nitrate for pelvic lavage is so popular when it is realized that it is precipitated by the salts in urine and deposited in the kidney parenchyma where more or less focal necrosis is produced. I believe the dyes Dr. Erdman spoke of or similar substances would be preferable.

I was pleased to note that the fine pyelograms shown were made with sodium solutions which I introduced for pyelography.

REPORT OF APPENDICITIS CASES*

JAMES Y. WELBORN, M.D.
EVANSVILLE

This report comprises the most of the cases of this type seen and treated by Dr. Edwin Walker and myself and other members of the Walker hospital staff, during the years 1899 and 1920, inclusive. I have taken this period because it includes all my work except for the year of 1921.

There were a few cases operated in the home each year; some of these are included; those which are not mentioned either had no histories or they were lost. As time went on there were less operated in the home, as it is a certainty that the best results are obtained in the hospital, where all equipment is convenient and more experienced attention can be given the patient. However, our mortality in cases operated in the home is not bad. I do not expect every case to be brought into the hospital, because there are instances in which it is best for the patient not to be moved, so we are always ready to operate such a case in the home.

The general character of these cases is "an average type"; the report is made for appendicitis alone and shows many of all types; there were some distinct cases in which other operations were done which are not counted. I am certain there were a few hundred that were complicated in gall bladder and pelvic cases.

During the years covered by the report 1,761 laparotomies have been done and I am sure that the appendix was removed in seven-tenths of them. During the past few years we seldom open an abdomen without removing the appendix. It is interesting to know that 60 per cent of all appendices show evidence of present or past infection. In gall bladder operations we do not always take out the appendix because in so many patients with a long incision there is a tendency for a gaping wound that is hard to close, so for this reason none except affected appendices are removed in gall bladder operative cases.

This series of cases covering a score of years shows variations in mortality; the causes are varied—a better surgical technique pertains in the latter half than in the first half. The physician treating the acute case now urges operation at once, wherein he formerly was more apt to follow the Ochsner treatment a few days under which treatment a certain number always became very severe—abscess or peritonitis cases. Then there is a growing tendency for people to heed the advice to go to the hospital early. The greatest factor in our decreased mortality is the "School of Experience" of the practitioner. After a physician sees one or two bellies opened which are badly stained with pus or show a badly necrotic appendix he can more forcibly persuade a patient to take radical treatment.

In this group of patients there has been no selection—all acute cases—regardless of their advanced stages, have been operated. The only ones we do not operate are those who refuse or those in which there is a distinct contraindication. Only operated cases are mentioned in this group.

It is quite instructive to the writer to know how inefficient some histories are, but it is quite agreeable to know that taking each five years as groups that the history-taking improves right along. You will see that the statistics are not complete because of inefficient histories occurring in the first ten years of the report.

I have made classifications in groups which show some interesting features. Group 1 consists of those under 20 years of age and shows a fair division in the sexes, but a greater mortality in boys; an *overwhelming* number of the gangrenous cases occurred in boys. I think this is not an end result reading because a gangrenous case let alone will usually develop a localized abscess. This idea is exemplified by the fact that we often find a gangrenous appendix in a localized abscess.

Group 1—All Under 20 Years

Boys, 156; girls, 188; total.....344
Fatalities—Boys, 14; girls, 10; total..... 24
Pus Cases 137
Gangrenous cases 41
Catarrhal cases 165

Mortality rate, 6.6%.

Practically all in this group are acute; only about twelve were chronic. We see also that

*Presented before the Section on Surgery of the Indiana State Medical Association, Indianapolis Session, September, 1921.

considering the severity of the cases they show very good resistance, but not so good as the adults in group 2, which shows a mortality rate of 1.8%. The frequency of chronic cases and early operations in acute cases in the second group are the great factors in the low mortality.

Group 2

In the 20's	552;	mortality 10
In the 30's	351;	mortality 13
In the 40's	206;	mortality 9
In the 50's	72;	mortality 8
From 60 to 88	18;	mortality 0
Unclassified ages	233;	mortality 21
	1,432	61

Mortality rate, 1.8%.

In the first group the youngest was a baby five weeks old with a gangrenous appendix in a strangulated hernia. This was secondary appendicitis; the case recovered. One child at one year and one at two years died; comparing with other young cases they do not show very good resistance under the third year.

Just to the contrary those people in group 3 are over 60 and show almost perfect resistance; these were ten males and eight females, eleven of them drainage cases. There were four cases over 80 years of age; the oldest was 88, a very bad abscess case. Nine of the eleven cases were abscess and two were gangrenous. The appendix was removed in all the cases.

Group 3

Over 60 years—Male, 10; female, 8.
Drainage cases, 11.
Four cases over 80 years.
Deaths, none.

Total number of drainage cases..... 566
Total number of cases of appendicitis.....1,776

The chief interest in this report is an analysis of fatalities:

Acute Septic Absorption: 5 cases. This was in the earlier days when Fowler's position, Murphy drip and hypodermoclysis were not given. We think now that there seldom ought to be a fatality from this cause.

General Peritonitis: 27 cases. No matter what the treatment is, there will be an occasional loss by this cause.

General Sepsis: 27 cases. Many in this group are more than 15 years ago and may have been acute septic absorption or peritonitis, however there will occur such cases which linger along and finally in from one to four weeks become exhausted and die of sepsis.

Pneumonia: 4 cases. These were adults who seemed to have an extension of the infection into the lung on the same side. There were several others who developed abscess and after drainage recovered.

Shock: 2 cases. One was a young adult, 16 years of age, the other was a patient 41 years of age. These were diagnosed shock and recorded as such. In reviewing the history I think they could have been distinct shock yet why not say acute septic absorption?

Pulmonary Embolism: 7 cases. This is shocking because most of these cases occurred at about the end of the second week when the patients were ready to go away from the hospital. Three of them were robust men who had had acute attacks and who had had drainage which had closed. I think the chief cause of this was either a phlebitis in the involved mesentery or in those cases where the appendix lay low and adjacent to the ileac veins.

Obstruction of the Bowels: 3 cases. Usually due to adhesions; in the group some others were saved by the second operation.

Tetanus: 2 cases. Both little girls; one theory advanced was that the tetanic germ may have come from the lumen of the bowel through the stump of the appendix. I doubt this very much. We cauterize the stump with phenol as a precaution against this or other infections. One of these cases had a slight scratch on the foot eleven days previously; this I thought was a more likely cause. One of these cases did not have the phenol cautery—the other had no record of it.

Doubtful: 8 cases. This group is made from histories not having a distinct cause of death given.

Pulmonary Tuberculosis: 1 case. This case had an acute exacerbation in a very chronic case of T. B. and lived but three weeks.

Acute Dilatation of the Stomach: 1 case. This is not a recent case and I do not recall the incidents except that all the symptoms pointed decidedly to this diagnosis and death occurred about the 5th day.

Tubercular Peritonitis: 1 case. This case was apparently a case of tubercular peritonitis which originated in the appendix but was extensive when operated and the patient lived three weeks.

Uremia: 2 cases. Both cases, one 59 and the other 55 years of age, suffered from typical suppression, showing casts and albumin, therefore nephritis was the attributed cause.

Coma: 1 case. I have not the sufficient data to explain this case, but think it was acidosis.

Empyema: 1 case. This was one of secondary infection of the pleural cavities and death occurred without drainage of the pleura.

Conclusions

Early diagnosis is the very most important thing, for until the diagnosis is made, an operation is not even thought of.

The old theory of considering the time of the beginning of the disease is not reliable because we find in most of these cases it is difficult to tell when the disease began, especially in children. One of the causes for many severe cases is the purging of the bowel by the practitioner the first two or three days; this is when there is abdominal pain which is due to peritonitis.

This gives the disease a chance to advance during the effort to move the bowel by purgatives.

A great many of the abscess cases and some of the advanced peritonitis cases that come in are those that have been treated by the "starvation" method, usually called the "Ochsner Method". Many physicians who believe in operations follow this until the case is very bad off, therefore I think it is a physician's duty in all cases to recommend the best treatment to be immediate operation.

Appendicitis is very frequent, many attacks mild in character are never diagnosed even by the best physicians and surgeons. Such attacks may be recurrent without becoming severe, and have caused many practitioners to consider the medical treatment.

Regardless of the symptoms, to correct the cause I think the safest recommendation is an immediate operation in all cases, but when operation is absolutely refused, then the abstemious treatment is permissible. I think we should no longer consider the third day as a criterion in judging when to operate because if an operation is necessary at all, the sooner the better. The patient will stand operations better either early in the disease or late in the disease; for instance, there is some advantage early because there is not so much involvement and the condition of the patient is prepared for its phagocytic protection. But from the fourth to the eighth day at the period, when a great many of these patients are apparenty better, there is probably less defense in the system. From the eighth to the twelfth day secondary abscesses are prone to occur and many of these cases have been brought in at that stage; at this time an operation is perfectly safe.

I find in the histories that most physicians take mouth temperatures. This is never absolutely accurate in any sickness and especially so in appendicitis. In serious illness of any type, rectal temperatures ought to always be taken. Many cases of appendicitis that have one degree of fever by mouth show four or five degrees per rectum.

Motto: "Early to diagnose and early to operate will reduce mortality statistics materially."

DISCUSSION

DR. G. D. SCOTT (Sullivan): In my short experience I have found that complications are more common in children than in adults. This I believe is true for two reasons. First, peritonitis is more common in children than the walled-off abscess. We do not have the protection of the wall and get more rapid absorption. Second, we have a higher position of the appendix in children that we do not have ordinarily in adults. Very often we find the appendix as high as the gall bladder, sometimes even around the stomach on the left side. Peritonitis in this region is dangerous, because of the rapid absorption of toxic bodies through the stomata peritoneal surface of the diaphragm. Recently I had two cases of appendicitis in children following a tonsillectomy. In both cases, appendicitis developed within less than one week after the tonsillectomy, and in both the tonsillectomy was preceded by acute tonsillitis. In both cases there was diffuse peritonitis, and in one, post-operative intestinal obstruction which was relieved by a secondary operation.

As to the cause of the mortality in appendicitis, I believe there are two primary causes. One is delay on the part of the attending physician or the patient, and the other is the use of cathartics. I believe there are more people killed by the use of castor oil and salts than any other drug.

I fully agree with the essayist as to the time to operate, and that is as soon as the diagnosis is made. I cannot see any indication for expectant treatment when an abdomen is filled with pus. Open the abdominal cavity under nitrous oxide and local anesthesia—there is but little shock even in the worst cases—and then is the time for expectant treatment.

DR. JAMES Y. WELBORN (closing): The doctor mentioned the point of diagnosis in reference to operation. If we always understood just what was inside it might be safe to wait in some cases, but I have seen diagnoses made in acute attacks which the doctor did not think were very serious; but as the doctor said, the delay increases the mortality. I have seen cases that we did not diagnose until after two or three years, the attacks were so light. But now at the second attack the operation is done. It is safer to imagine it is a severe case than to say it is a light case. As the years go by our mortality decreases, and if we keep on studying the disease I think we will lower our mortality materially.

A NEW HISTOLOGY OF RED BLOOD CORPUSCLES AND STAINING TECHNIC

E. L. DEWEY, M.D.
WHITING, INDIANA

INTRODUCTION.—Writers of histology and physiology invariably have described the red blood corpuscle as "a structureless, homogeneous mass". The facts here presented, I believe, show the falsity of that theory. My stain and technic were worked out in the laboratory by months of painstaking experimental endeavor.

My work has been seen and criticized by a few members of the medical profession. The principal criticism of this strange blood picture is: "It is very beautiful, but probably a trick of chemistry." The falsity of this criticism is proven in the following manner:

1. A specimen of blood fixed and stained by my method, decolorized by acid alcohol and re-

stained with one of the blood stains in common use, shows no appreciable injury histological or otherwise to the red blood corpuscle.

2. Blood fixed and laked by the usual technic and stained with my stain gives a picture of the red blood corpuscles normal in every respect as we have been accustomed to seeing them.

3. My staining shows in nearly every specimen red blood corpuscles that have been injured in making the smear, in which some of the segments have been broken loose and are seen just outside of the injured corpuscle. Proof that they existed and were there before fixing or staining.

4. Over acidity of my stain with carbolic acid causes the corpuscle segments to shrink into globular forms of various sizes, appearing on the surface of the red stained corpuscle as pale neutrophilic granules. The same picture occurs in over acidity with acetic acid, except the granules are basophilic.

Can any accident or trick of chemistry produce the blood picture shown here; with the various staining characteristics of the red blood corpuscles, repeated many times with uniform results? I do not think so.

The importance of this new histology of the red blood corpuscles to the medical profession in general, and to the physiologist and pathologist in particular, is obvious, and any discussion in that direction by me would be superfluous. This new histology was discovered by me December 14, 1921. E. L. DEWEY, M.D.
Whiting, Indiana, April 17, 1922.

THE RED BLOOD CORPUSCLE HISTOLOGY*.—The red blood corpuscle is a very definitely organized structure composed of a central or supporting membrane, "the structureless, homogeneous mass," which is covered completely with very delicate membraneous segments, individual and separated from each other by an entre-segmental membrane. The periphera of the corpuscle is surrounded with a delicate membrane which supports the peripheral segments. (Plate I, B.) The peripheral membrane and the entre-segmental membrane take the basic stain.

The peripheral segments are fairly uniform in size and arrangement, presenting a picture not unlike the cross section of an ear of corn, the kernels representing the peripheral segments. In the full size matured corpuscles the number of these peripheral segments varies from eleven to twenty or more. The highest number counted by me is twenty-six, the average being about sixteen. In the small and young corpuscles I have seen as few as five or six. (Plate I, E.)

The segments which occupy the central stroma of the corpuscle are irregular in size and shape. In the young corpuscle, there may be no central segments; or only one or two. (Plate I, E.) Those of the periphera occupying the whole surface of the corpuscle.

In from 80 to 85 percent of red blood corpuscles the segments all take a pale neutrophilic stain with rather a pinkish tint. (Plate I, A's.) The other percentages take a heavy basophilic stain with a metallic lustre. In some corpuscles this characteristic is manifested in all of the segments, central and peripheral (Plate I, F), some only the peripheral segments (Plate I, D), and others only the central segments (Plate I, C.); still others mixed, a portion of the central and of the peripheral segments basophilic (Plate I, H, I.) and others a segment or segments here and there, basophilic (Plate I, G, J.).

It is my theory that the corpuscle segments carry gases and perhaps fluids of the blood, and that the kind of gases or fluids carried and their reaction determine the different staining characteristics shown here.

Corpuscle segments are destroyed and disappear with the escape of their gases or fluids in all of the ordinary methods of fixing and staining blood, which eliminates any chance or possibility of showing them in the finished specimen.

DEWEY'S BLOOD STAIN TECHNIC.—Place in a graduated bottle of 400 cc. capacity the following solutions, in the order named:

Sat. aqueous solution *Eosin, W. S.*[1]...30.00 cc.
Sat. aqueous solution *Aniline Violet*[2]..60.00 cc.
1% aqueous sol. *Sodium Bicarbonate* 60.00 cc.

Place in a water bath, the water of which comes to the level of the solution, or a little above, and boil 30 minutes. Remove from the water bath and while still boiling hot add 95 percent alcohol to 300 cc. Shake well for a few minutes and set aside to cool; then filter.

Dissolve the precipitate collected on the filter paper in 95 percent alcohol by rubbing up well in a mortar. Add to filtrate and enough more alcohol to bring the total volume up to 640 cc. Add distilled water 80 cc., and 40 drops of saturated alcoholic solution of Aniline Violet**. Neutralize with 1 percent acetic acid solution. The amount to be used is determined by titration as follows: Take 1 percent aqueous solution of sodium bicarbonate 60 cc., place in a beaker and boil a few minutes to drive off the hydrogen atom and CO_2. Add three volumes of water and three or four drops of phenophthaline indicator. Titrate with 1 percent acetic acid solution until the solution shows only a very faint trace of the pink color. If tested now with litmus it will be found neutral. The buret reading will indicate the amount of 1 percent acetic acid solution which is now added to the stain.

Filter. This constitutes the STOCK to DEWEY stain and keeps indefinitely.

*Demonstrated at a meeting of the Lake County, Indiana, Medical Society, Gary, Ind., March 9th, 1922.

(1) E. Leitz, New York. (2) Merck & Co., New York.

FORMULA No. 8.—So numbered because it was the eighth formula made from the stock stain just described, and the first one that showed completely all of the segmentation of the red blood corpuscle:

Stock Stain.....50.00 cc.
1% Aqueous solution acetic acid..... 5.00 cc.
1% Aqueous solution carbolic acid liq.[3] 5.00 cc.

Mix well and filter. The stain is now ready for use. Use only distilled water in making solutions.

Acetic acid solutions used should be titrated with N/10 standardized solution of sodium hydroxide. This for the reason that over acidity of the stain, which causes failure, may be corrected. And to do this it is necessary to know the alkaline equivalent of the acid solution used in making the stain. In the formula given above, the alkaline equivalent of the acetic acid solution used was, 1.80 cc. of the acid solution was neutralized by 1.00 cc. N/10 standardized solution of sodium hydroxide.

MAKING THE SMEAR.—In this procedure, as in all others that follow, the student must remember that the red blood corpuscle is a delicately organized structure, consisting of a central or basic membrane which is entirely covered with hollow membranous segments which carry gases and perhaps some fluids of the blood; and that these segments are destroyed and disappear in all of the ordinary methods of fixing and staining. This has been kept constantly in mind in working out my technic. To preserve these delicate membranous structures, and show them in the finished specimen, the technic is herewith presented.

PREPARATION OF THE SLIDES.—Make perfectly clean by washing in water, then alcohol. Heat over an alcohol flame or Bunsen burner until all moisture has disappeared. Allow to cool.

THE SMEAR.—Prick the lobe of the ear or tip of the finger in the usual way. On the edge, near the distal end of a second slide collect a small drop of blood, press it down, drop edge first onto the prepared slide until the drop is completely flattened out. Separate the slides by a quick swipe in the long axis of the slide being smeared.

Allow the smear to dry in the air at ordinary room temperature for ten minutes.

FIXING THE SMEAR.—Immerse in Squibb's Ether[4] that has not been previously opened or used, for one hour. Remove from ether and allow to dry without washing.

STAINING.—Immerse in DEWEY's stain No. 8, from two to ten hours, according to intensity desired. Beautiful and contrasty specimens are produced in from three to six hours. If it is desired to study the blood platelets or leucocytes, the longer exposure is recommended. Wash the specimen in running water for five minutes. Dry in the air at room temperature. Immerse now in aniline oil water for five minutes. Remove and immediately plunge into a diluted solution of *Methyl Violet*[5] (made by adding a few drops of the concentrated alcoholic solution to 100 cc. of distilled water) for five minutes. Wash in running water for ten minutes. Dry in the air at room temperature. Mount in balsam in the usual way if it is desired to preserve the specimen for future reference.

The use of aniline oil water mordant and methyl violet counter stain brings out the peripheral and entre-segmental membranes, and differentiates the corpuscle segments from each other.

CAUSES OF FAILURE.—The general rule and principle, "careful attention to details," essential in all laboratory work, must be remembered here.

INDICATIONS OF OVER-ACIDITY OF THE STAIN.—Red blood corpuscles are laked by acetic acid in sufficient concentration with the giving up of blood gases and the disappearance of the corpuscle segments. A slight over-acidity of the stain with acetic acid causes shrinkage of the segments into globular forms of various sizes which appear on the stroma of the red stained corpuscle, as basophilic granules. This also is the picture when the stain is over acid with carbolic, with this difference, the granules are pearly like neutro-basophilic.

Over-acidity with acetic acid may be corrected by the careful addition of a very small amount of N/10 standardized solution of sodium hydroxide. In the case of over-acidity with carbolic acid, more stock stain may be added and acetic acid in proportion.

Before attempting to correct a supposed over-acidity of the stain be sure that all other factors that cause failure have been eliminated. The use of ether that previously has been opened, exposed to air or light, or that previously has been used as a fixative, causes failure. The corpuscle segments shrink into globular forms much in the same manner as when the stain is over-acid.

OTHER CAUSES OF FAILURE.—(1) A smear too thick, (2) Exposure of smear too long to atmospheric conditions before or after fixation, (3) Smear made on a moist or dirty slide, (4) Exposure of smear to heat above body temperature, (5) Allowing the smear to be exposed to the fixing ether too long or too short a time.

The worker with this technic and stain perhaps will save time and prevent annoyance and mistakes by setting aside a portion of a stain that has been made correctly and successfully,

(3) Phenol Liquefactum, U.S.P.
(4) Ether Squibb, for anesthesia, E. R. Squibb, New York
(5) E. Leitz, New York.

to be used as a control in making and testing new stain.

My stain seems to improve with age. The first formula that I made that was successful has been in use over four months and still gives brilliant and contrasty specimens.

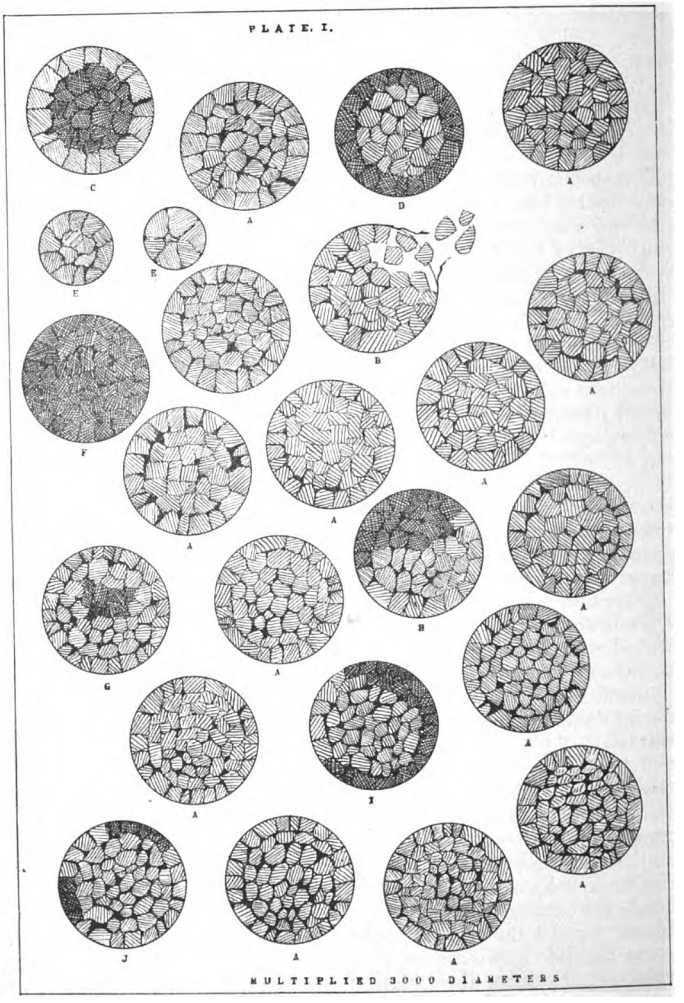


PLATE I

Drawings from microscopical specimens of normal blood, multiplied three thousand diameters:

A's—Red blood corpuscles with all neutrophilic segments. F—All basophilic.

B—A neutrophil that has been injured in making the smear, showing broken peripheral membrane and displacement of corpuscle segments.

C—Central segments basophilic; peripheral neutrophilic.

D—Peripheral segments basophilic, central neutrophilic.

H, I, J—Mixed basophilic and neutrophilic

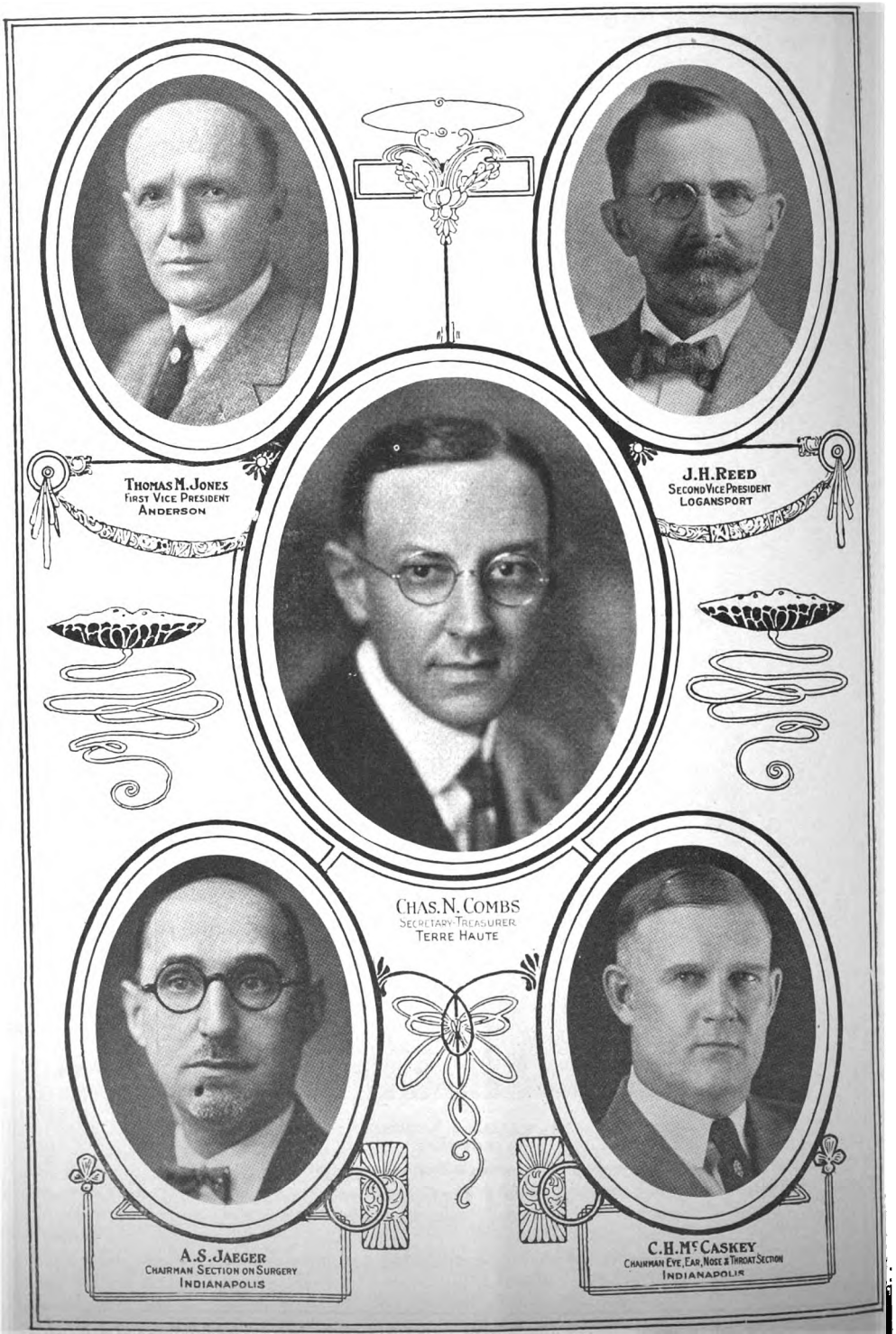
E, E—Young neutrophiles.

"THE STRUCTURELESS HOMOGENEOUS MASS".—If the student desires only to study that portion of the red blood corpuscles, then allow the blood smear to remain in the fixing ether 24 hours. This removes all of the blood gases or fluids from the corpuscle, with the disappearance of the corpuscle segments. Stain with DEWEY Stain No. 8.

Wonderful contrasty and brilliant specimens result. The "structureless homogeneous mass", taking a beautiful deep red stain evenly throughout the stroma.



WILLIAM R. DAVIDSON
EVANSVILLE
President of the Indiana Medical Association, 1921-1922


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SECRETARY SECTION ON MEDICI...
MUNCIE

THE MUNCIE SESSION

On September 27, 28 and 29, the Indiana State Medical Association will meet in annual session at Muncie, as the guests of the Delaware County Medical Society, assisted by the Muncie Academy of Medicine. Although because of the renown of its medical societies Muncie is pleased to be able to entertain the state medical association, Muncie citizens always rejoice in acting as hosts to large groups of visitors as it gives them the pleasure of acquainting the guests with the general excellence of this city and of converting strangers into friends.

Muncie has interesting proof of its varied and romantic history, from the times of the Delaware tribe of Indians and Chief Munsey and Chief Tecumseh, through the struggles of the white pioneers, the gas "boom", and to the present industrial prominence, which is supported by one of the richest farming districts in all Hoosierdom. And Muncie citizens will not forbear until their guests know at least a resume of the city's history and a smattering of her present (as they consider it) approach to perfection.

By a treaty with the general government, probably the treaty of 1818, a tract containing 672 acres, lying on both sides of White river, was reserved and at the time was held by a Delaware Indian, a widow named Rebecca Hackley. The sale of this reserve to Goldsmith C. Gilbert for the sum of $960 was transacted about 1825. The settlement began to develop until, in 1837, Munseytown, or Muncietown, as it was then named, was a community of 320 inhabitants. In this year, according to the first issue of the "Muncietonian", the first publication of the locality, "A superb court house, with a cupola, etc., 45 feet square and 28 feet high, is to be built."

That the development of the transportation facilities was even then in the public mind is shown by the further quotation from the journal that "The contemplated Central Canal will pass through this place and the connecting link, either by canal or railroad, between the Central and Whitewater Canals, will in all probability terminate at this point."

In 1845, through an act of the legislature, the name was shortened from Muncietown to Muncie. In 1854 Muncie was declared by the county commissioners to be a corporate town, and eleven years later, when the population had reached 2,196, the town was incorporated as a city.

For more than three decades there was a steady growth, with the activities of the citizens tending rather to industry, when, in the fall of 1886, gas was found in the county and the famous boom was on. It was a time of wild speculation and romance which almost resembled the gold rush of the "'49ers" and the later dash to the Klondyke. Capitalists flocked in and real estate, the object of the speculation, was tossed higher and higher. The citizenry was virtually insane.

To quote from Dr. G. W. H. Kemper's historical account: "It soon became the boast that Muncie had no coal or wood yards, that twelve dollars a year paid for all the gas needed for fuel and light. Gas supply is unlimited, there is enough to last a thousand years, a well may be placed on every forty acres or even less and will continue to produce gas for all time. Such was the optimism at a time when nearly every day marked the increase of output by millions of cubic feet. For several years the people indulged in riotous extravagance with nature's gift. * * * The gas was allowed to burn day and night. At noontide, as at midnight, the roaring flambeaux that stood by the roadside and at the crossroads in the country consumed gas by thousands of feet, but never once was there a thought of checking it. The horizon was aglow from thousands of gas lights, and some farmyards were so brightly lighted that the chickens never knew the proper time to roost."

Following the cessation of the original "mushroom" boom, there began a big industrial growth which forecasted Muncie as the "Birmingham of the North". This growth was more enduring, as is evidenced by the fact that some of the industries then attracted to Muncie are still in existence and are among the leading manufactories of the city today. In 1887, the Muncie Board of Trade was organized as a corporation "for the promotion of any and all undertakings calculated to advance the interests, improvement and general welfare of the City of Muncie". It is significant that this body's first president, J. A. Goddard, is still the active head of the Joseph A. Goddard Company, wholesale grocers.

Probably the greatest factor in Muncie's industrial development was the Citizens Enterprise Company, which was organized in 1891 to promote the industrial interests of the city and especially to secure additional factories. Numerous substantial firms were thus attracted until, in 1895, despite the fact that the panic of 1893 was just past, the city had twenty-seven industries, with 5,680 employes and a monthly payroll of $241,500.

Once again there was a period of steady growth, which was quickened in 1900 when the interurban line between Muncie and Anderson was put in operation. Soon afterward cars

were run through to Indianapolis; by 1903 the traction lines north to Eaton and east to Selma were in operation; and in 1906 the Portland line was opened.

MUNCIE'S MEDICAL SOCIETIES

It is especially meet that Muncie be host to the annual session of the Indiana State Medical Association as this city is the home of two really great medical societies, one of which is among the oldest in the state and the other now undoubtedly one of the most important and one of the largest local societies in the Middle West. These are the Delaware-Blackford Medical Society and the Muncie Academy of Medicine.

The first practical steps toward the organization of a medical society in Delaware County were taken in April, 1865. Dr. S. V. Jump, president, and Dr. N. W. Black, secretary, were the first officers. The Delaware County Medical Society was later reorganized several times to conform to the requirements of the State Medical Association, but the society has never failed to exist and function. As far as can be learned, Dr. G. W. H. Kemper of this city is the only living physician who was a charter member of the body.

In the latter part of 1916 it was thought expedient by the officers of both the Delaware and Blackford County societies that the organizations unite, and this was accomplished under the name of the Delaware-Blackford Medical Society, which name it continues to bear. A considerable measure of the success of the society is credited to Dr. U. G. Poland, of this city, who served as secretary for twelve years, and to Dr. H. D. Fair, who held the same office for eight years.

The Muncie Academy of Medicine, now one of the largest local medical societies in Indiana, is the outgrowth of the old "Quiz Club," which had its origin during the winter of 1914, when Drs. D. M. Green, U. G. Poland, E. S. Green, O. E. Spurgeon, H. D. Fair and C. M. Mix began weekly sessions for the discussion of medical, surgical or allied pertinent topics. The weekly discussions, conducted by the alternately serving "quiz masters", attracted rapidly increasing groups, until a few months later it became necessary to reorganize and broaden the scope of the society. This reorganization was effected on October 16, 1914, and the present name was adopted. Drs. O. E. Spurgeon, president, and H. D. Fair, secretary, were the charter officers.

Changes in the programs were made as the Academy grew. In addition to the quiz, a paper on some scientific subject was read by one of the members at each meeting. Abstracts of these papers were printed in the JOURNAL of the Indiana State Medical Association, and the favorable comment received from many sources indicated that physicians in other parts of the state appreciated the work of the Academy. It was deemed expedient at this time to appoint a critic, and Dr. I. N. Trent was the first to hold this position. The critic's part in the weekly programs added much to the interest and usefulness and often the humor of the occasion. Soon physicians and surgeons from surrounding cities began attending the academy meetings and, during the past year or more, the more attractive programs have drawn attendance from all sections of the state and from adjoining states. Leading specialists from all sections of the country have addressed the meetings. All of the most prominent medical schools have furnished a large quota of speakers, whose presence is in constant demand at the biggest gatherings of medical men in the country.

Under the administration of the present officers, Dr. B. R. Kirklin, president, and Dr. R. L. Beeson, secretary, with the assistance of Dr. Will C. Moore, chairman of the program committee, the Muncie Academy of Medicine has become probably the best known local medical organization in the Middle West.

At the present time the Academy meets on three Friday nights each month. The membership is over the 150 mark, but the attendance is often more than 200, and has occasionally approached the 300 mark. It is virtually a sectional organization, as its roster includes the names of the leading physicians and surgeons of Anderson, Marion, Alexandria, Hartford City, Richmond, Newcastle, Dunkirk, Portland, Winchester, Redkey, Ridgeville, Saratoga, Union City, Middletown, Mt. Summit, Selma, Parker, Farmland and Indianapolis. More than fifteen Indianapolis members are active in the Academy. The honorary membership includes noted medical men in Baltimore, Boston, Chicago, Cleveland, Cincinnati, Columbus, O., and at the Mayo Clinic in Rochester, Minnesota.

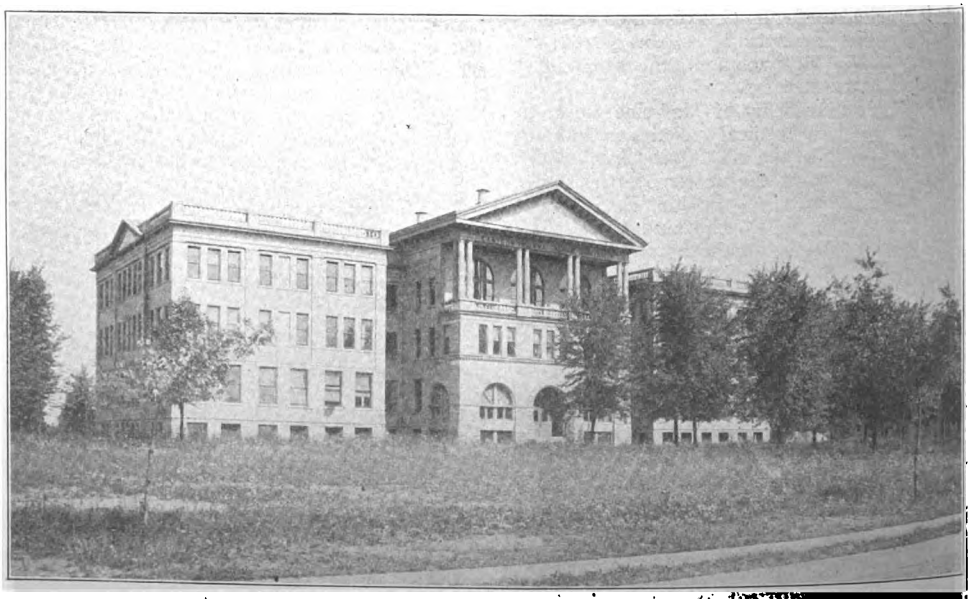
HOSPITAL FACILITIES

The hospital facilities of Muncie are a little cramped at the present time, as we have only one hospital, which is the Muncie Home Hospital. It is a non-sectarian, non-political institution of fifty beds capacity, and is under the management of a Board of Governors, which is composed of eleven representative business men of the city. In former years there were three hospitals in the city of Muncie, all of them small, private hospitals. In 1914 Dr. G. R. Andrews, one of our local surgeons, built the present Home Hospital and ran it as a private institution until 1917, when it was sold to the present management and has since been run as a public institution.

The hospital is a closed-staff hospital, and is operated under the minimum standards laid down by the American College of Surgeons. The staff is divided into two groups, namely, the general staff, which is composed of all the physicians who are privileged to practice in the

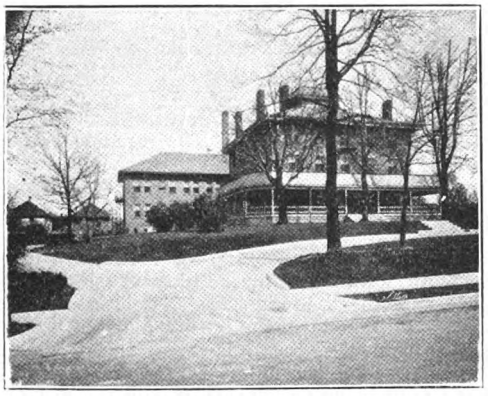


COURT HOUSE



INDIANA STATE NORMAL SCHOOL

hospital, and the executive staff, which is a group of twelve carefully selected physicians of the general staff, who are appointed annually by the Board of Governors. The chief of staff and the secretary of the staff are elected annually by the executive staff and confirmed by the Board of Governors. The executive staff is solely responsible for the professional conduct of the hospital, but has nothing to do with the business of the hospital. Every member of the general staff is compelled to make application for the privilege of practicing in the hospital before he is admitted to the staff. He is then assigned to the service he cares to be assigned to, providing he is found competent to be in this service. His application is approved by the executive staff and the Board of Governors. The hospital operates a training school for nurses which at the present time consists of twenty students. The school for nurses of the



HOME HOSPITAL

Muncie Home Hospital ranks as one of the best among the various training schools of the state.

Adequate pathological, clinical and x-ray laboratory facilities are maintained. The pathological and clinical laboratories are fully equipped to do all types of laboratory work, including basal metabolic work, blood chemistry, etc. The x-ray laboratory is also very fully equipped and they are now installing a 20-inch spark-gap treatment apparatus.

As before stated, the capacity of the hospital is very inadequate. However, the management has been assured during the last few weeks of funds sufficient for an additional 75 or 100 beds and building plans are being rapidly formulated for a new wing which will be a very modern improvement. This gift to the community comes from the Ball Brothers, who have so liberally given to all worthy enterprises in this city, having recently given away one million dollars to be used for community purposes.

HOTELS, TRANSPORTATION FACILITIES, ETC.

With possibly two exceptions, no city in Indiana is more adequately situated as to hotel facilities to entertain the annual session of the



HOTEL ROBERTS

Indiana State Medical Association than is Muncie. In fact, during the past eighteen months this city has attracted so many conventions that it ranks probably next to Indianapolis as a convention host.

Largest and newest of Muncie's hotels is the magnificent Hotel Roberts, which Muncie citizens boast of to all comers and which will be headquarters for the Muncie Session in September. From the amusement parlors and grill room at the bottom to the uppermost of the 270 guest rooms, the Hotel Roberts is absolutely complete. It is also well situated for convention convenience. It is two blocks from the Union Station and two blocks from the Traction Terminal Station. Traction cars from Indianapolis over the Anderson division pass the hotel and those on the Newcastle division stop one block away. The Roberts is directly across the street from the postoffice and from Federal Park, one of the smaller city parks.



The Hotel Delaware is fully as conveniently situated, as it is two blocks from the Traction Terminal Station and all outbound cars on the

Anderson, Fort Wayne, Portland and Union City lines pass it.

The New Kirby Hotel, while close to the center of the business district, is in a somewhat quieter place. One of its chief advantages is that it is only a few yards from the Muncie Chamber of Commerce building.

The Braun Hotel is two blocks from the Chamber of Commerce building and is on the Fort Wayne and Portland traction lines. There are several other smaller hotels in the city which road service to the south and north is offered will provide ample accommodations for the visitors at the Muncie Session.

Visitors to the Muncie Session this fall will find Muncie easily accessible from all directions, both by steam and traction lines. This city is on the St. Louis-Cleveland division of the Big Four, which passes through Terre Haute, Indianapolis, Anderson, Muncie and Union City, in this state. Through service to Cincinnati or Chicago may be had on the C. & O. line. Rail-on the Fort Wayne-Connersville division of the L. E. & W. The Pennsylvania lines branch train from Muncie to Converse connects at the latter station with the main line of the Pennsylvania, from New York to Chicago. Almost hourly service from every direction is offered by the Union Traction Company. Passengers from Indianapolis have similar service on either the Newcastle or Anderson divisions. From Muncie, traction lines radiate to Winchester and Union City to the east; Dunkirk and Portland to the northeast; and Hartford City, Bluffton and Fort Wayne to the north. Direct connection may be had at Anderson with cars for Middletown, Alexandria, Tipton, Elwood, Marion and Wabash.

SCHOOLS

The Eastern Division of the Indiana State Normal School, located in the suburb of Normal City, is growing at a rate which promises to make it within a few years one of the largest of the State's educational institutions. The enrollment during the past summer was approximately 1,200, and the winter enrollment this year will be more than 900. The faculty, not including special summer school instructors, includes thirty members. The school here has been a division of the Indiana State Normal School only since 1916. As the Muncie National Institute, it had been in existence for a number of years, but in 1916 the grounds and buildings were purchased by the Ball Brothers of this city and presented to the State. The school is now known locally as Ball Teachers' College, although this is not incorporated in the legal name. Construction work has been started on a new science building and a new gymnasium on the Normal campus. Both of these buildings will be among the best of their character in the State. A new athletic field and running track and several tennis courts will be established near the gymnasium.

Twelve grade school buildings and two high schools comprise the property of the school city of Muncie. The Central High School building is located at the edge of the business district and the Wilson High School is on the south side. While the full state course of study is offered the high school students, emphasis is placed on the commercial and vocational work and the high schools here are among the leaders in the state in these departments. The electrical engineering work, under the direction of Harvey M. Anthony, is undoubtedly of university character and the electrical laboratory is excelled in no high schools and in few colleges and universities in the country. The woodworking, machine, printing and drafting shops are also models of excellence.

One new grade school building is now under construction to replace the Emerson School, which had become inadequate. The eleven other grade buildings are modern and commodious.

During the past year there were 6,900 pupils in all of the city schools, of whom about 1,900 were in the high schools. The teaching corps included 268 instructors and supervisors.

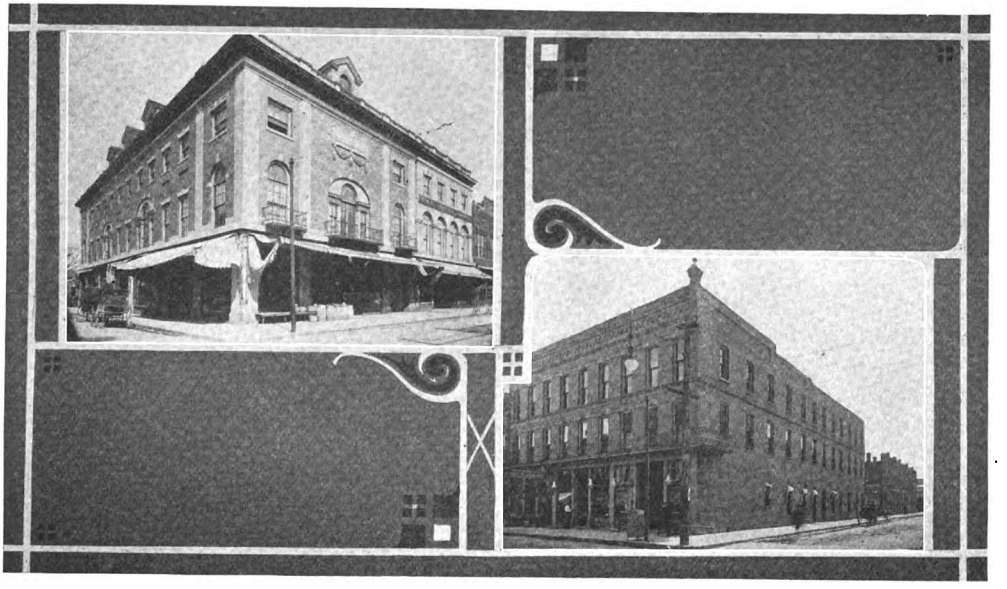
One parochial school, St. Lawrence School, is maintained by the St. Lawrence Catholic parish.

GOLFING

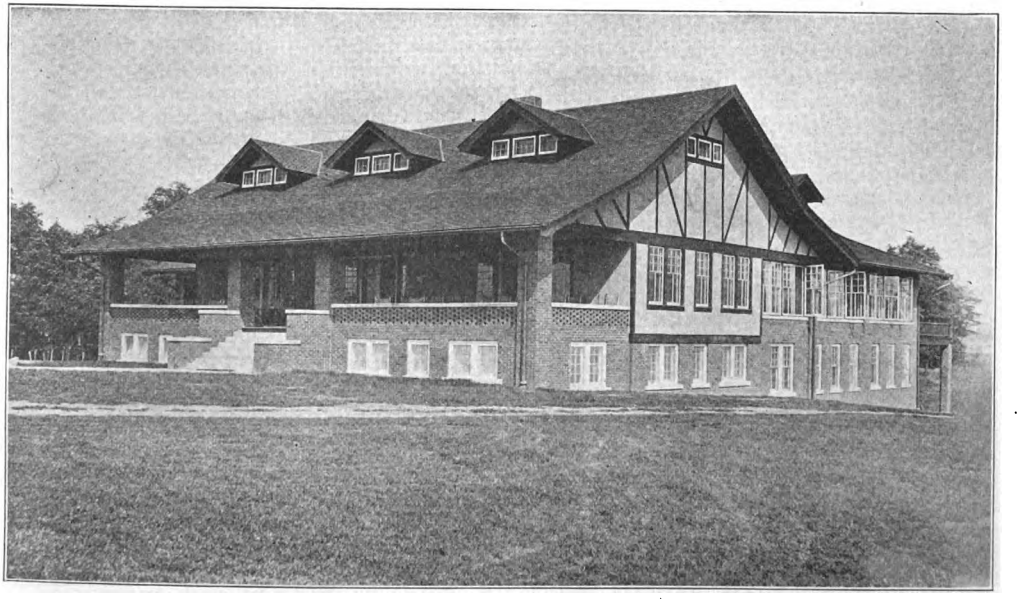
Those visitors to the Muncie Session who have succumbed to the germ, "golfitis incurabilis," will delight in the opportunities afforded by the course of the Delaware Country Club, located about three miles east of the city. A golf tournament on Wednesday afternoon for the medicos is one of the high lights of the convention program. The Country Club course, enlarged from nine to eighteen holes a year ago, is one of the sportiest and most complete eighteen-hole courses in the state. It was designed and the construction was supervised by Arthur Lockwood of French Lick, who built the famous French Lick courses. Another attraction, and one to which Muncie has exclusive privilege, is the open state golf champion. Jack Blakeslee, the Delaware Country Club pro, won the state open title at Indianapolis last year, achieving the phenomenal record of finishing sixteen strokes above the runner-up. Blakeslee was also the only Hoosier who qualified in the national open tourney at the Skokie course, Glencoe, Ill., in July. The club house also will be at the disposal of the guests during the tournament.

FACTORIES

Statistics from a survey taken in 1920 show that Muncie then had 53 factories, with a total of 13,540 employes, a combined weekly payroll of approximately $356,028.75, and a factory



CHAMBER OF COMMERCE CENTRAL INDIANA GAS CO.



DELAWARE COUNTRY CLUB

production value in 1919 of $100,000,000. Among the larger manufactories are Ball Brothers' Glass Manufacturing Co., the largest glass fruit jar company in the world; the Muncie Products Co., a unit of the General Motors Corporation, steering devices and transmissions; Warner Gear Company, transmissions, differentials and clutches; Durant Motor Company, manufacturers of the "Durant Six" automobile; Warner Corporation, auto parts; Muncie Foundry and Machine Company, motor castings; Ontario Silver Company, silverware; Broderick Boiler Works; Gill Clay Pot Company; Glascock Manufacturing Company, auto bodies; Hemingray Glass Company, glass insulators; Hinde Dauch Paper Company; Indiana Bridge Company; Indiana Steel and Wire Company, and Republic Iron and Steel Company.

PARKS

Muncie's four parks, two of which are large, embrace an area of 165 acres. McCulloch Park, the city's particular pride, is one of the best known and most beautiful parks in the state. A large shelter house, equipment for sports, and a small zoo are features of McCulloch Park. Heekin Park, in the southeastern part of the city, does not have the natural advantages of McCulloch Park, but is, nevertheless, a real beauty spot. Since early in the season motor tourists have been flocking to the new tourists' camping site established in Heekin Park. Many camping conveniences are provided. Rose Park, located in the southwestern section, is essentially a playground, and Federal Park, in the business district, is a place of rest and coolness for the pavement-weary and the heat sufferer.

Y. M. C. A. AND Y. W. C. A.

The Y. M. C. A. and Y. W. C. A. are civic centers. The Y. M. especially, because of its adequate accommodations, is headquarters for many educational, religious and athletic activities. While the Muncie "Y" is outstanding among the associations of the state, the boys' department has received particular renown, especially in Bible study work. For the past six years, the boys' department has led the entire United States in the number of national association Bible study diplomas received. Camp Crosley, the Y. M. C. A.'s summer camp at Lake Tippecanoe, is one of the finest boys' camps in the country and it is being taken for a model by many associations.

CLUBS AND LODGES

Visiting physicians who are members of any of the national or international civic clubs will find a "club welcome" in Muncie, for this city is represented by most of the prominent clubs. The Exchange, Rotary and Optimist Clubs meet each Thursday noon at luncheon, the Kiwanis Club on Wednesday noon, the Lions and Ad Clubs on Tuesday noon. An effort is being made to have a joint meeting of all of these clubs on the Thursday noon of the week of the Muncie Session, at which Dr. W. A. Evans, of Chicago, a session speaker, will likely talk.

Muncie is a strong fraternal city and members of almost all fraternal orders will find a hearty welcome here. The Muncie Aerie of Eagles has a splendid home and the Elks' Lodge is just completing a large and exceptionally fine home. A Masonic Temple, which will be one of the best in this section, is in course of construction. Brother Masons, Elks, Moose, Eagles, etc., will be on every hand to welcome the "pill-dispensers" and knife and saw wielders, when they come to Muncie in September.

NEWSPAPERS

Muncie's two daily newspapers, The Muncie Star, a morning paper which is a member of The Star League of Indiana, and the Muncie Evening Press, will carry full session reports each day. The Star, which has a daily circulation of 23,000 and a Sunday circulation of 16,000, is the largest daily in eastern Indiana, and it covers the entire Eighth district. It is served by the Associated Press. The Muncie Evening Press has a circulation of about 9,000. It carries the I. N. S. telegraphic reports.

CHAMBER OF COMMERCE

The Chamber of Commerce building is one of the principal convention centers of Muncie. The chamber is one of the largest in Indiana, having a membership of about 800, but its principal claim to distinction is in its home building, which is second in size and value to that of the Indianapolis chamber, but which is generally agreed to be the best equipped and most serviceable for Chamber of Commerce purposes in the state. The Chamber's assembly hall, which will seat about 600 persons, is utilized by many conventions.

CHURCHES

Muncie is quite a church city, having thirty-eight churches, representing all prominent denominations. Three churches, the High Street M. E., the First Presbyterian and the First Baptist, are virtually in the business district of the city, and of the other large ones, the Friends Memorial, Jackson Street Christian and St. Lawrence Catholic are within a few blocks of the business district.

The Muncie Public Library, which is Carnegie endowed, has 42,374 books in circulation. In July there were 18,278 borrowers listed and books were taken out 111,786 times. The library building is at the edge of the business district of the city.

The city is protected from fire by a force of thirty-five firemen, located at three stations. The buildings and grounds of the department are valued at $60,000 and the equipment at $30,000. The police department has twenty-seven members, who work under the two-platoon system.

Other statistics of interest regarding Muncie include the following: Population, 36,524; miles of streets, 138.42; area, 7.15 square miles; miles of pavement, 90.61; miles of gas mains, 100; miles of public sewers, 43.05; assessed valuation of city property, $58,188,780; miles of city car lines, 14.5.

PLACES AND TIME OF MEETINGS

The Hotel Roberts has been selected as the general headquarters of the Association and here the registration desk will be located. The first meeting of the session will be that of the Council which will be held in the grill room of the Hotel Roberts at 4:30 p. m. on Wednesday. In the evening of the same day the House of Delegates will meet in the grill room of the Hotel Roberts at seven o'clock, and following this, at eight o'clock will be the informal smoker in the ball room of the Hotel Roberts. The evening of the first day the ladies will be entertained with a theater party at the Wysor Grand Theater. The golf tournament will be held on Wednesday afternoon at the Delaware Country Club. On Thursday morning the general meeting will be held in the high school auditorium, and in the afternoon the Section on Surgery will meet at the high school auditorium, while the Section on Medicine and the Section on Ophthalmology and Otolaryngology will meet at the Hotel Roberts. In the evening the Garrett Boys' Band of Muncie will give a concert at the Hotel Roberts from 6:30 until 7:30, and at eight o'clock a public meeting will be held at the high school auditorium with Dr. W. A. Evans, of Chicago, the speaker. Following this there will be dancing at the Hotel Roberts. On Friday the House of Delegates will meet at the Chamber of Commerce at 8 a. m., and the various sections will hold meetings at 9 a. m. The general meeting will be held at the high school auditorium on Friday afternoon at 2 p. m. The Council will meet in the Hotel Roberts at the same hour.

REGISTRATION

It is important that immediately upon arriving in Muncie the members of the Association should proceed at once to the registration bureau at the Hotel Roberts and register. Registration will be by membership card, and to avoid delay and confusion members are urged to have their cards ready for inspection by the Registration Committee. Registering members are requested to indicate the number of ladies in the party so that the Committee on Entertainment may know early the number to be provided for. Badges will be furnished to the members for identification. Letters and telegrams may be sent to the Hotel Roberts in charge of the Committee on Registration.

HOTELS

The Hotel Roberts is the headquarters of the Association. Rates at this hotel are as follows: Rooms, with shower, accommodating two people, $4.00; room, with bathtub, accommodating two people, $5.00 and $6.00; for each additional person in room, $2.00. Hotel Delaware: Single room, with bath, $2.50; double room, with bath, $3.50; single room without bath, $1.50 to $1.75; double room without bath, $2.50 to $2.75. Hotel Kirby: Single rooms, $1.25, $1.50 and $2.00. There are several smaller hotels which have very good accommodations. If you are unable to secure satisfactory accommodations at any of the above hotels, immediately get in touch with Dr. Earl S. Green of Muncie, who has charge of the reservations, and the Committee on Arrangements will see that suitable accommodations are arranged, either in one of the smaller hotels or in homes.

OFFICIAL CALL TO THE HOUSE OF DELEGATES

The next annual session of the Indiana State Medical Association will be held at Muncie, Wednesday, Thursday and Friday, September 27, 28 and 29, 1922.

The House of Delegates will be constituted as follows: Marion County, 8 delegates; Allen County, 2 delegates; Lake County, 2 delegates; St. Joseph County, 2 delegates; Vanderburg County, 2 delegates; Vigo County, 2 delegates; the other seventy-eight counties each one delegate (two more paid-up members will entitle Delaware-Blackford County to one more delegate); thirteen councilors; the ex-presidents, namely, G. F. Beasley, C. S. Bond, M. F. Porter, W. N. Wishard, J. C. Sexton, G. W. McCaskey, A. W. Brayton, J. B. Berteling, G. T. McCoy, D. C. Payton, T. C. Kennedy, W. F. Howat, J. P. Salb, G. F. Keiper, J. H. Oliver, J. R. Eastman, W. H. Stemm, C. H. McCully, David Ross; in addition to this, the President and Secretary of the Association, and the Editor of THE JOURNAL, all without power to vote except in case of a tie, when the President shall cast the deciding vote.

Blank credentials have been sent by the Secretary to each county society, and the properly executed credentials for the delegates should be mailed immediately to Dr. Charles N. Combs, Terre Haute, or brought to the session. No delegate will be seated unless wearing the official badge.

The House of Delegates will convene promptly at 7 p. m. Wednesday, September 27th, in the Grill Room, Roberts Hotel, and again at 8 a. m. Friday, at a meeting place to be designated later.

The order of business will be as follows:

1. Call to order by the President.
2. Roll call and seating of qualified delegates.
3. Reading of the minutes of previous meeting.
4. Report of the Secretary-Treasurer.
5. Reports of standing committees:
   a. Administration and Medical Defense.
   b. Publication.
   c. Public Policy and Legislation.
   d. Medical Education.
   e. Hospital Standardization.
   f. Automobile Insurance.
   g. Scientific Work.
   h. Necrology.
   i. Arrangements.
6. Reading of Communications.
7. Reading of Memorials and Resolutions.
8. Unfinished business.
9. New business.
10. Adjournment.

The election of officers will be the first order of business Friday at 8 a. m. In addition to the regular officers, the terms of the following expire January 1, 1923, and their successors must be elected at this session: Delegates to the American Medical Association to succeed J. R. Eastman, Indianapolis; alternate, M. R. Combs, Terre Haute, to be elected for the ensuing two years. Delegates must have been members in good standing of this Association and of the American Medical Association for the past two years. Since the next meeting will be in San Francisco, no one should be elected who is not willing to make this trip and represent the Association. Member of the Committee on Administration and Medical Defense to succeed George R. Daniels, Marion, for the ensuing three years; also successor to the late Dr. Frank B. Wynn, Indianapolis, whose term would have expired Dec. 31, 1923. Member of the Committee on Hospital Standardization to succeed E. J. Lent, South Bend, for the ensuing five years. Delegates from counties comprising the third, sixth, ninth and twelfth districts are reminded that the terms of their councilors will expire on December 31, 1922, and new councilors should be elected to succeed the following:

Third District, Walter J. Leach, New Albany.

Sixth District, Frank J. Spilman, Connersville.

Ninth District, William R. Moffitt, Lafayette.

Twelfth District, W. D. Calvin, Fort Wayne.

It is very probable that some of these elections already have been held, but they should be reported to the House of Delegates at this session for confirmation.

CHARLES N. COMBS, Secretary.

ANNOUNCEMENTS

Following the address of Dr. W. A. Evans, on Thursday evening, there will be dancing in the ball room of the Hotel Roberts for all those who care to indulge.

Arrangements for class dinners or luncheons should be made promptly through the chairman of the Committee on Arrangements. Due care should be observed not to have any social functions interfere with the scientific meetings.

The Muncie Exchange, Rotary and Optimist Clubs meet each Thursday noon at luncheon, and the Kiwanis Club each noon on Wednesday. Members of these clubs in other cities are invited to be the guests of the Muncie clubs at the regular luncheon.

Essayists are reminded that all papers presented before the Association become the property of the Association, and, therefore, are not to be published or submitted for publication elsewhere than in THE JOURNAL of the Indiana State Medical Association.

The Garrett Boys' Band, Muncie's musical organization which has gained more than state-wide fame, will give a concert at the Hotel Roberts from 6:30 until 7:30, Thursday evening, and later, following the public meeting in the high school auditorium, there will be a dance in the ball room of the Hotel Roberts.

The members and those accompanying them are requested to register on their arrival. The bureau of information and registration is in the lobby of the Roberts Hotel. Present your membership cards when registering. Members without their cards may register after their standing has been verified by consulting the records.

The election of officers will be the first order of business at the meeting of the House of Delegates held at the Chamber of Commerce, Friday, September 29, at eight o'clock. No member of the House of Delegates is eligible to office, and delegates to the American Medical Association must have been members in good standing of the A. M. A. for the past two years.

You are requested to wear the official badge which is supplied when you register when attending or participating in the meetings. Members of the House of Delegates will have designating badges. Only those who are accredited delegates are entitled to vote at the meetings of the House of Delegates, or even to address the House of Delegates without special permission.

Register early. The booth for registration will be open Wednesday afternoon at one o'clock, and be open throughout the session. Please have your pocket cards with you in order to avoid delay in registration. If you have paid your dues to your county society secretary *only recently*, and have not yet received your membership card, present a receipt from the county secretary and you will be permitted to register. Please get your badge and wear it.

A luncheon for all officers of the Medical Reserve Corps residing in Indiana has been arranged for noon Thursday, September twenty-eighth, at the Grill Room, Roberts Hotel, Muncie. Lt. Col. A. W. Williams, M.C., U. S. A., will be present. Immediately following the luncheon there will be an informal meeting of the Medical Officers attached to the 84th Division, at which time plans for perfecting the organization will be discussed.

Not in many years have ladies been offered so much entertainment as has been provided for those who will attend the Muncie Session. Therefore, do not hesitate to bring your wife or sweetheart in the mistaken notion that she will have a stupid time. The committee in charge of the entertainment for the ladies throughout the session is composed of Mrs. I. M. Trent, Mrs. L. L. Ball, Mrs. E. S. Green, Mrs. U. G. Poland, Mrs. C. E. Miller, Mrs. C. M. Mix and Mrs. S. G. Jump.

Essayists should bear in mind that their papers as presented at the Muncie Session represent copy for THE JOURNAL, and accordingly the title and full name and address of the essayist should appear at the top of the manuscript, and the body of the manuscript should be carefully edited. Attention to the paragraphing, punctuation, capitalization and grammatical construction of sentences will go a long way toward helping the editor and printers. All manuscripts should be typewritten.

The ladies especially are invited to attend the Muncie Session. They will be entertained by a theater party on Wednesday evening; with a luncheon at the Country Club on Thursday noon, followed by a musical in the afternoon; and, on Friday, by an automobile ride, and luncheon at the country home of Dr. and Mrs. C. M. Mix. Those ladies who expect to attend the luncheons should make known the fact to the chairman of the Committee on Arrangements so that appropriate arrangements may be made.

Golfers are invited to go to Muncie early in order to enjoy the hospitality of the Delaware Country Club, which offers a new eighteen-hole course said to be one of the best in the Middle West. On Wednesday morning an opportunity will be offered of settling old scores with golfing friends, and in the afternoon there will be a tournament. Those intending to take advantage of the golfing privileges are requested to write Dr. Frank G. Jackson, 214 East Adams Street, Muncie, or to Dr. C. A. Leatherman, care General Motors Corporation, Muncie.

CONDENSED PROGRAM

Wednesday, September 27

AFTERNOON

Meeting of the Council, at 4:30 p. m., Grill Room, Roberts Hotel.

EVENING

Meeting of House of Delegates, 7 o'clock, Grill Room, Roberts Hotel.

Informal Smoker and get-together meeting, 8 o'clock, Ball Room, Roberts Hotel.

Thursday, September 28

FORENOON

General Meeting, 8:30 a. m., High School Auditorium.

No section meetings.

AFTERNOON

Meeting of Section on Surgery, 2 p. m., High School Auditorium.

Meeting of Section on Medicine, 2 p. m., Ball Room, Roberts Hotel.

Meeting of Section on Ophthalmology and Otolaryngology, 2 p. m., Grill Room, Roberts Hotel.

EVENING

Public Meeting, 8 p. m., High School Auditorium. Musical program and address by Dr. W. A. Evans, of Chicago. Subject, "Sickness in Winter Time."

Friday, September 29

FORENOON

Meeting of House of Delegates at 8 a. m., Chamber of Commerce.

Meeting of Section on Surgery, 9 a. m., High School Auditorium. Election of Section officers.

Meeting of Section on Medicine, 9 a. m., Ball Room, Roberts Hotel. Election of Section officers.

Meeting of Section on Ophthalmology and Otolaryngology, 9 a. m., Grill Room, Roberts Hotel. Election of Section officers.

AFTERNOON

Meeting of Council, 2 p. m., Grill Room, Roberts Hotel.

General meeting, 2 p. m., High School Auditorium.

OFFICIAL PROGRAM OF THE ANNUAL SESSION OF THE INDIANA STATE MEDICAL ASSOCIATION

TO BE HELD AT MUNCIE,

SEPTEMBER 27, 28, 29, 1922.

HOUSE OF DELEGATES

First meeting, Grill Room, Roberts Hotel, Wednesday evening, September 27, at 7 o'clock.

Second meeting, Chamber of Commerce, Friday morning, September 29, at 8 o'clock.

COUNCIL

First meeting, Grill Room, Roberts Hotel, Wednesday afternoon, September 27, at 4:30 o'clock.

Second meeting, Grill Room, Roberts Hotel, Friday afternoon, September 29, at 2 o'clock.

Additional meetings at the call of the President of the Council.

GENERAL MEETINGS

(HIGH SCHOOL AUDITORIUM)

Thursday, September 28, 8:30 a. m.
Friday, September 29, 2 p. m.

PUBLIC MEETING

(HIGH SCHOOL AUDITORIUM)

Thursday, September 28, 8 p. m.

SECTION ON SURGERY

(HIGH SCHOOL AUDITORIUM)

Thursday, September 28, 2 p. m.
Friday, September 29, 9 a. m.

SECTION ON MEDICINE

(BALL ROOM, ROBERTS HOTEL)

Thursday, September 28, 2 p. m.
Friday, September 29, 9 a. m.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

(GRILL ROOM, ROBERTS HOTEL)

Thursday, September 28, 2 p. m.
Friday, September 29, 9 a. m.

COMMERCIAL EXHIBITS

(HOTEL ROBERTS)

Wednesday noon to Friday night.

REGISTRATION

(LOBBY—HOTEL ROBERTS)

Wednesday afternoon.
Thursday and Friday.

ENTERTAINMENT

Wednesday, September 27, 8 p. m., smoker and get-together meeting Ball Room, Roberts Hotel.

Wednesday morning, September 27, open golf; and in afternoon golf tournament, Delaware Country Club.

Wednesday evening, September 27, moving pictures and vaudeville at the Wysor Grand Theatre for the ladies.

Thursday, September 28, 12 m., luncheon for all officers of the Medical Reserve Corps residing in Indiana, Grill Room, Roberts Hotel. Lt. Col. A. W. Williams, M.C., U. S. A., speaker.

Thursday, September 28, following public meeting, dancing, Roberts Hotel.

Thursday noon, September 28, luncheon for the ladies at the Delaware Country Club, followed by a musical in the afternoon.

Friday, September 29, 10 a. m., automobile ride for the ladies, visiting Ball Brothers Fruit Jar Company, General Motors Corporation, parks, Indiana State Normal School, Durant Motors, etc. Twelve to 1:00 p. m., luncheon at "Wild Banks" Farm, the country home of Dr. and Mrs. C. M. Mix.

SCIENTIFIC PROGRAM

GENERAL MEETINGS

(HIGH SCHOOL AUDITORIUM)

Thursday, 8:30 A. M.

Organization.

Address of Welcome.

Address of President, "The Status of the Profession in Indiana", William R. Davidson, Evansville.

SYMPOSIUM: ENDOCRINOLOGY.

1. GEORGE W. MCCASKEY, Fort Wayne.

Subject: The Medical Phase of Endocrinology.

Abstract.—Outline of principles of endocrinology. Organs concerned. Active bio-chemical bodies produced and a summary of their physiological and pathological effects. Type of cases in which a clinical study of endocrine function is most valuable. A few cases illustrating the diagnostic value of these methods. Summary of the present status of endocrinology. The various diseases in which perversions of endocrine function play a dominant or at least an important role.

Discussants: Edgar F. Kiser, Indianapolis; L. P. Drayer, Fort Wayne.

2. C. C. BITLER, Newcastle.

Subject: The Neurological Phase of Endocrinology.

Abstract.—The ductless glands in their relation to the sympathetic nervous system and the consequent effect of their secretions upon the vegetative nervous system and resulting nervous manifestations on the individual. The products of the glands are discussed individually and collectively. The nervous symptoms following infectious diseases are partly explained by the unbalancing effect of the toxins of the infections upon endocrine glands.

After a careful review of the literature and personal interviews with authorities and my own limited observations on the subject the conclusion is reached that the glands of internal secretion probably have a greater effect upon personality both normal and abnormal than we have ever supposed, and that the field for scientific investigation is unlimited, as the most we have is theories and treatment almost entirely empirical.

Discussants: Albert E. Sterne, Indianapolis; Charles P. Emerson, Indianapolis.

3. W. D. GATCH, Indianapolis.

Subject: The Surgical Phase of Endocrinology.

(*No abstract.*)

Discussants: Tom Jones, Anderson; H. H. Martin, Laporte.

Friday, 2 P. M.

SYMPOSIUM: MENINGITIS.

1. CHARLES F. NEU, Indianapolis.

Subject: Meningitis, Differential Diagnosis.

Abstract.—The diagnosis of meningitis primarily is determined by the consideration—

(1) of symptoms depending upon disease processes taking place on the surface of the brain and their manner of development.

(2) of general symptoms due to systemic involvement by the infection or its toxins.

(3) of the history of its probable cause.

(4) of changes to be found in the character and composition of the cerebro-spinal fluid.

Various systemic diseases as well as focal lesions of the central nervous system may be accompanied by symptoms very similar in type and character to those met with in the various forms of meningitis. Typhoid fever, pneumonia, uremia, delirious states resulting from toxins arising within the body or introduced into it from without, vascular lesions, brain tumors, acute-psycho-neurotic states and many other conditions at times develop a symptomatology closely resembling that of meningitis.

In many of these conditions the diagnosis is rendered more difficult because of the fact that meningitis may arise as a complication of the primary disease.

The information to be gathered from examination of the cerebro-spinal fluid is in most cases the most reliable means of making a definite diagnosis. But even this at times may lead one astray because in the early stages of some forms of meningitis, particularly when secondary to some focal infection, one may find very little change in the character or composition of the cerebro-spinal fluid.

Since lumbar puncture, if properly carried out, rarely does any harm, and is practically devoid of any danger, this procedure is justified in every case of doubt presenting suspicious symptomatology.

2. MILES F. PORTER, JR., Fort Wayne.

Subject: Meningitis, Treatment.

Abstract.—The treatment of meningitis depends naturally upon the etiological factor. In the more common form (that produced by the meningococcus) treatment means Flexner's serum. Attempt should be made to get all the serum necessary to produce desired effect, introduced within thirty-six hours of onset or at least diagnosis. In preparation large quantities of spinal fluid should be withdrawn, both to avoid risk of administration of serum and for therapeutic effect. Intravenous use of serum in conjunction with intraspinous highly advisable. Large doses of serum not harmful but prolonged use of it may be productive of continued fever and neurological symptoms. Recrudescence should be rare.

Meningitis from other causes not rare—and not hopeless—original focus of infection should be removed or drained and biological therapy attempted. Frequent drainage of fluid helpful. Authentic cure not rare—illustrative cases.

3. HARRY BOYD-SNEE, South Bend.

Subject: Otitic Meningitis.

Abstract.—The paper discusses suppurative meningitis of otitic origin and deals particularly with the etiological factors which are operative in determining that complication as it has been observed to develop in connection with insults to the integrity of the temporal bone.

Discussants: Robert M. Moore, Indianapolis; D. O. Kearby, Indianapolis; Earl O. Daniels, Marion; George V. Cring, Portland.

SECTION ON MEDICINE

(BALL ROOM, ROBERTS HOTEL)

Thursday, 2 P. M.

1. JOHN H. WARVEL, Indianapolis.

Subject: Some Observations on Cases Showing a Disturbance of Carbohydrate Metabolism.

Abstract.—1. The usual carbohydrate intolerance as noted in the diabetic patient.

2. The faulty carbohydrate metabolism noted in the thyroid, pituitary and other endocrine disturbances.

3. The appearance of hyperglycemia before the presence of glycosuria; in patients who later develop true diabetes.

Point number three will be the one on which I wish to place the most emphasis.

Discussants: B. M. Edlavitch, Fort Wayne; C. R. Strickland, Indianapolis.

2. O. G. PFAFF, Indianapolis.

Subject: Congenital Pyloric Stenosis.

Abstract.—Congenital pyloric stenosis occurs with considerable frequency. Many cases not diagnosed inevitably go on to fatal termination. Recent surgical intervention shows almost uniformly ideal results. The diagnosis is easy and the operation both simple and safe, and should generally be performed under novocaine anesthesia.

Discussants: James C. Carter, Indianapolis; W. D. Gatch, Indianapolis.

3. ALFRED HENRY, Indianapolis.

Subject: The Treatment of Pulmonary Tuberculosis.

Abstract.—The treatment for pulmonary tuberculosis is what it has always been, *i. e.*, bed rest, fresh air, nourishing food, peace of mind, and medical attention. The greatest of these is bed rest. The medical profession is making strides in helping people with this disease get well by insisting on more effort on the part of the patient.

Tuberculin therapy is used in some cases but seems to be overworked. The idea is not to condemn tuberculin therapy but to advise more precaution in the selection of suitable cases for its use. The typical case is one running no temperature and getting nowhere in the cure process. He might be called the semi-invalid.

The greatest help that has come to the medical profession in the treatment of advanced pulmonary tuberculosis is artificial pneumothorax. This consists of partially or completely collapsing the involved lung. This method forces rest, which is the greatest curative agent in the tuberculosis field.

Graduated exercise is just as necessary in the convalescing stage as rest is in the active stage in the cure-taking process.

Discussants: Gardner C. Johnson, Evansville; Charles R. Bird, Greensburg.

4. J. E. LUZADDER, Bloomington.

Subject: The Therapy of Syphilis.

Abstract.—Syphilis is responsible for one-third of pathology, is the chief factor in organic diseases of the nervous system, and is responsible for 12 percent of the 200,000 cases of insanity in the United States. Ten percent of the male population of the United States are infected, 10 percent of dermatoses are specific.

The most valuable of laboratory methods are the testing of blood for complement fixation, examination of spinal fluid and demonstration of the spirochetes in the lesions.

In treating syphilis a risk accompanies the conjoined administration of neoarsphenamine and mercury. For intensive treatment these drugs should be given separately.

The drug intrimine should be given in doses of 3 cc. intramuscularly. This drug is a sulphur product—a reducing agent—which prevents arsenic and mercury from exercising a toxic effect on nerve tissue.

In neuro-syphilis the intraspinal treatments are given as the intravenous administration has not proven satisfactory.

In conclusion neosalvarsan therapy is necessary since it controls infectivity and contagion. It yields quick results. Mercury is essential as an aid to a permanent cure. Overtreatment is preferred to lack of treatment. Mercury given not by the month but by the year, and neoarsphenamine not by the dose but by the half-dozen of doses, must be given before any hope of a cure can be effected.

Discussants: C. L. Bock, Muncie; Frank G. McCarthy, Terre Haute.

Friday, 9 A. M.

1. JAMES WYNN, Indianapolis.

Subject: Sensitivity to Epidermal and Pollen Proteins; Diagnosis and Treatment.

Abstract.—The various clinical pictures of sensitiveness to pollens and epidermal proteins have long been recognized, as evidenced by the work of Bostock, Blackley, Curtis, Dunbar, etc. To Meltzer belongs the credit of pointing out that certain types of asthma and paroxysmal rhinorrhea are anaphylactic phenomena. It remained for Walker to put the treatment of both asthma and hay fever of protein origin on a sound practical basis.

The state of sensitiveness to any protein means the presence of fixed cellular antibodies; on the other hand, the state of immunity for a particular antigen means the presence of circulating antibodies for that specific antigen.

A state of sensitiveness may manifest itself by any one or more of several symptoms, sneezing attacks and lacrimation, asthmatic seizures, cutaneous manifestations, etc. Each syndrome has rather distinctive features. Analysis of certain facts in the history will often suggest the offending protein. To clinch the etiological diagnosis fixed cellular antibodies to the suspected protein should be demonstrated by the skin test.

The ideal treatment of these conditions is of course the removal of the cause—the withdrawal of patient from protein (as in the vacation treatment of hay fever) or protein from patient (as in the feather and hair cases). In many instances this is impractical, and the patient must be desensitized. This is accomplished by a course of injections with the specific antigen. (Preparation of the antigen and its administration are fully discussed.)

Though the specific treatment of these protein cases is at present hardly within the realm of the general practitioner, he should be familiar enough with clinical features to recognize and classify these cases with considerable accuracy as they occur in his practice. The more complete differential diagnosis and desensitization must be left to those especially equipped for this work.

Discussants: C. G. Beall, Fort Wayne; William D. Asbury, Terre Haute.

2. S. C. WATERS, Middletown.

Subject: Epidemic Jaundice.

Abstract.—Differentiation of various forms of jaundice. Criticism of assumption that the leptospiro icterohemorrhaica is the cause. Extent and prevalance. Influenzal character of epidemic. History, seasonal and age incidence. Summary of symptomatology of forty cases clinically observed. Treatment and conclusions.

Discussants: W. M. Stout, Newcastle; Will P. Shimer, Indianapolis.

3. DR. CHARLES LOUIS MIX, Chicago.

Medical Address.

4. W. A. FANKBONER, Marion.

Subject: Sequellæ of Lethargic Encephalitis.

Abstract.—Epidemic Encephalitis—Some After Effects: 1. Anatomical considerations. 2. Personality before and after. 3. Report on cases mentioned in paper presented at last meeting.

Discussants: Wier Miley, Anderson; C. A. Sellers, Hartford City.

SECTION ON SURGERY

(HIGH SCHOOL AUDITORIUM)

Thursday, 2 P. M.

1. CHARLES H. FRAZIER, Philadelphia.

Surgical Address, "The Trend of Neurological Surgery."

2. J. RILUS EASTMAN, Indianapolis.

Subject: A Safe Method for Drainage of Intra-Abdominal Abscesses.

Abstract.—Employment of extra peritoneal drainage tube for retro-cecal abscesses; use of large cigarette drain for trans-abdominal drainage of pelvic abscess without puncture of abscess at the time of opening of the abdomen, dependence being placed upon the pressure of the drain, suction and chemotaxis to induce rupture of the abscess after a walled off canal has been formed; other applications of this principle.

Discussants: Miles F. Porter, Sr., Fort Wayne; Wm. J. Moore, Muncie.

3. A. P. ROOPE, Columbus.

Subject: Thyroid Disease.

Abstract.—Goitre is an extremely prevalent disease and is much neglected in its early and inactive states.

Early and borderline cases of hyperthyroidism often present great difficulties of diagnosis. Not all cases are surgical. X-ray has its place in treatment. The nose, throat and mouth should have careful attention in every case.

Treatment of goitre of the adolescent is usually mental, moral and physical hygiene. Sooner or later adenomatous goitre is practically always toxic. The length of time goitre has existed and its size bear no relation to the violence of symptoms. Young children with enlarged thyroids should always receive medical care. Prevention is a duty this generation owes to the next.

Discussants: J. Y. Welborn, Evansville; F. H. Jett, Terre Haute.

4. FRANK W. FOXWORTHY, Indianapolis.

Subject: Diagnosis of Duodenal Ulcer.

Abstract.—Operative surgery and autopsies have shown a large percentage of undiagnosed duodenal ulcers. On account of the hordes of chiropractors and other irregulars endeavoring to cause dissension among the members of the regular medical fraternity, any procedure that promotes harmony between the internists and surgeons is to be desired. As the surgeons and internists at the joint section meeting at the St. Louis session of the American Medical Association agreed on a rational method of the treatment of duodenal ulcer, is it not possible for them to agree on a standard method of diagnosis? Such a method, with a new scheme for examination, is offered for consideration.

Discussants: W. H. Foreman, Indianapolis; H. O. Bruggemann, Fort Wayne.

5. F. C. WALKER, Indianapolis.

Subject: Reconstruction of Perineal Genito-Urinary Childbirth Injuries.

Abstract.—The anatomy and functions of the perineal parts and the closely associated genito-urinary structures have not been as clearly visualized, both in the normal and the abnormal, as they should be to act as a basis for reconstruction. This has led to errors in prevention, diagnosis and treatment. Pelvic supporting structures best understood when considered in three strata. It is pretty generally understood now that some of the standard former operations for perineal repair were merely vaginal resections and failed to get the supporting tissues.

Associated secondary lesions as misplacements, decensus, cystocele and rectocele are very common. Cystocele and rectocele are true herniæ. Any reconstruction surgical procedure must take into consideration any and all of these conditions and their various combinations. A great many such results could be prevented by better obstetrics. Age; number of children; concurrent disease in other organs; character and degree of the local secondary resulting derangement and the social conditions must be carefully appraised in outlining treatment.

Hysterectomy is advisable in women near or past the menopause, or in younger women with a distinct uterine or cervical disease, followed by complete adjustment of the remaining structures. The primary object is to cure the patient of the cause of her suffering and annoyance. Too many return complaining of no relief or incomplete relief because all factors have not been duly considered. Vaginal or abdominal route may be elected, depending on indications and conditions. If hysterectomy not best, some reliable form of suspension should be used. The bladder in any method should be dissected from its cervical and vaginal attachments and anchored high by using the perivesical fascia and a well supported vaginal stump.

Deep perineal recto-vaginal septum dissection is very essential. Rectum should be pushed upward and backward and fixed with a vaginal suture. The levator muscle and fascia must be exposed and securely united as these are the real supporting structures. Method of deep suture insertion simplifies operative technic. Smallest amount of foreign material should be used as is consistent with good co-aptation without constriction.

No small part of the success of the operation depends upon the post-operative care of a good nurse. This work depends for results on the minutest care to detail. Lack of this may defeat the purpose of a well executed operation.

Discussants: A. A. Rang, Washington; J. H. Weinstein, Terre Haute.

6. E. E. PADGETT, Indianapolis.

Subject: Tuberculosis of the Female Generative Organs.

Abstract.—This disease is by no means rare. In fact it is more common than believed. Often it is overlooked due to the removal of tubes and attributing the condition to some other kind of infection in the absence of further examination.

It is more common in the tubes but may occur in any of the pelvic organs. It may be either primary or secondary to areas of infection elsewhere in the body, most often believed to be the lung. Although it is believed to be more often secondary, often the primary infection is not located. It is a disease of the child-bearing period but no age is exempt.

Its progress is slow in most forms and its symptoms are those of a chronic pelvic inflammation. However, it is accompanied by a temperature in the afternoon which can practically always be found if searched for long enough and which is a vital point in the diagnosis.

Its treatment is operative in practically all cases, and the time and nature of the operation is dependent on the general condition of the patient. (Lantern slides.)

Discussants: Carl Habich, Indianapolis; G. B. Jackson, Indianapolis.

Friday, 9 A. M.

1. A. M. MENDENHALL, Indianapolis.

Subject: Occiput Posterior Positions; Early Diagnosis and Various Methods of Treatment.

Abstract.—Obstetrical reasons why difficult labor. Percentage of occiput posteriors. Early diagnosis important. Diagnosis very often not made even when forceps are being applied. No excuse for applying forceps without a diagnosis as to position. Injuries resulting from occiput posterior delivery.

Treatment:—1. Plenty of time. 2. Postural treatment. 3. Manipulation (explanation in detail). 4. Rotation with hand in vagina. 5. DeLee's treatment. 6. Scanzoni maneuver. 7. Forceps. 8. Version.

Conclusions:—The first three are quite safe. The other methods require considerable experience and skill.

Discussants: Fred Clapp, South Bend; Clay A. Ball, Muncie.

2. H. A. DUEMLING, Fort Wayne.
Subject: Technique of Cholecystectomy.

Abstract.—The course of the cystic artery in relation to the common duct and the gall bladder.

The relation of the cystic duct to the common duct.

Exhibit will be made of a number of clay models and a number of specimens covering the various phases of gall bladder disease.

Discussants: Hugo O. Pantzer, Indianapolis; J. C. Sexton, Rushville.

3. SIMON J. YOUNG, Gary.
Subject: Some Observations on Gall Bladder Surgery.

Abstract.—This paper is designed to bring under discussion some of the problems which confront the surgeon in a case involving operation upon the gall bladder—this in the belief that this field is fertile still for discussion — endeavoring to stimulate thoughtful consideration of those factors of safety and sanity which contribute to better end-results.

First, it deals with the functions of the gall bladder, concerning which there is no little diversity of opinion. Naturally, one's views upon function influence his decision in the choice of an operation, as well as in the treatment of complications. The relationships existing between the gall bladder and other viscera have to be considered, especially with reference to routes of infection, from one to the other. This leads to a discussion of complications and their causes. Pertinent to the subject also are such questions as the necessity for early operation; the indications for and methods of drainage; safety factors in technic; and recurrences after operation. In this, as in other fields of surgery, it is desirable to have a clear conception of inter-related pathology; in no other way may an operation be planned which offers the maximum in service to the patient.

Discussants: E. S. Jones, Hammond; G. G. Eckhart, Marion.

4. G. D. MARSHALL, Kokomo.
Subject: Diseases and Injury to the Hip Joint.

Abstract.—Many of the conditions affecting the hip joint will be mentioned only in connection with differential diagnosis. Special emphasis will be made of the utility of the Bradford abduction splint, in the treatment of both disease and injury of the joint. The need of weight bearing braces in the later treatment of congenital dislocation. Diseases peculiar to the hip joint (Legg-Calve disease, or osteo chondritis deformans juvenalis). Snapping hip joint. Dislocation due to paralysis, poliomyelitis. Fracture of the neck of femur. Traumatic arthritis.

Discussants: C. C. Terry, South Bend; M. S. Davis, Marion.

5. M. A. AUSTIN, Anderson.
Subject: Repair of Three Uncommon Fracture Cases, with the Use of an Original Crucifixion Splint in Fracture of the Surgical Neck of the Humerus.

Abstract—A report of three recent fracture cases with unusually difficult problems to meet. (1) A multiple fracture case of left hip, left leg, left forearm and right wrist. Perfect result in forearm and leg, good functional result in hip and requiring removal of right carpal scaphoid. (2) Fracture of upper third of hip, in which ordinary methods of immobilization failed and five reductions were required, and perfect result obtained after open operation and immobilization in an unusual manner. (3) Fracture of the surgical neck of the humerus of the type which Scudder states is impossible to immobilize and retain without open operation. Perfect result obtained by the use of an original "Crucifixion" type of extension splint.

Discussants: J. E. Hiatt, Richmond; E. H. Clauser, Muncie.

6. H. R. ALLEN, Indianapolis.
Subject: The Surgical Engineer.

Abstract.—There now exists an organization of surgical engineers with headquarters and laboratories and a firm determination to investigate physical principles and devices and uses of energy employed in different branches of surgery. On its consulting staff are the ablest mechanical engineers and human anatomists this country affords. Upon their recommendation various items in general surgical usage will be investigated as to their soundness and appropriateness. Correct and appropriate ways and means will be recommended in place of what is known to be inappropriate and unsound. In its work this association is free to enter the field of chemistry or bone and muscle dynamics or any other field under the broad subject of physics. In my paper a few examples of surgical and anatomical shortcomings will be presented.

Membership in the Surgical Engineers' Association is open to all truth loving men, capable of discerning and following facts wherever facts may lead them. There will be no medical or other kind of politics in this association. There are no dues nor membership fees except conscientious mental efforts that will contribute towards putting surgeons and surgery on a sound mechanical basis for the first time in the history of surgery.

Discussants: D. S. Wiggins, Newcastle; M. E. Klingler, Garrett.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

(GRILL ROOM, ROBERTS HOTEL)

Thursday, 2 P. M.

1. CARL H. MCCASKEY, Indianapolis.
Chairman's Address.

2. ALBERT E. BULSON, JR., Fort Wayne.
Subject: Cycloplegics in Refraction Work.

Abstract.—Cycloplegics necessary for satisfactory refraction work.

Atropin, hyoscin and homatropin in the order named considered most efficient, though homatropin generally employed in adults and supplemented by stronger cycloplegics when indicated.

Complete paralysis of accommodation is a necessary condition for estimating the static refraction.

Method of using cycloplegics and reasons for failure to secure satisfactory results.

Idiosyncrasy.

Retinoscopy absolutely necessary in refraction work, but retinoscopy practically useless without cycloplegia.

Examples of differences in refraction as determined with and without cycloplegics as also with cycloplegics of different strengths.

Mild and strong cycloplegics.

Rules for prescribing glasses after determining the static refraction.

Discussant: Thomas C. Hood, Indianapolis.

3. WILLIAM B. CHAMBERLIN, Cleveland, Ohio.
Address: Endonasal Operations on the Lachrymal Sac.

4. F. S. CUTHBERT, Kokomo.
Subject: System and Thoroughness in Eye Examination and Treatment.

Abstract.—Essentials are a capable diagnostician and a faithful observance of routine. First examination should establish an accurate diagnosis in most all cases. Great demands on examiner's eyesight. Snap diagnosis frequently fails. Searching personal history. Steps in routine examination. Value of retinoscopy. Cycloplegics. Method of treating posterior synechia. Thoroughness in office treatments versus "drops" used in the eyes at home.

Discussant: W. A. Hollis, Hartford City.

Friday, 9 A. M.

1. W. F. HUGHES, Indianapolis.
   Subject: Cataract Extraction and Its Complications.

Abstract.—The extraction of cataract has been, and is, probably the most frequently discussed subject in ophthalmology. The ideal procedure has not yet been fully developed. The prognosis should be carefully guarded.

A cataract extraction by a skillful, experienced operator, under the most favorable conditions, may come to failure, often when least expected. The operation should be done only under the most favorable conditions of the patient and surroundings.

The mode of procedure should be thoughtfully selected for each individual case with a view of avoiding complication both during the operation and the subsequent healing process. Complications should be met promptly as they arise.

Secondary cataract operations should be done with the same care as the primary. Some risk is involved.

Discussant: Frank A. Morrison, Indianapolis.

2. W. S. TOMLIN and D. S. ADAMS, Indianapolis.
   Subject: Phases of Chronic Pharyngeal Infection.

Abstract.—Focus of attention on operative terminology has led the public and also the profession to think in terms of tonsillectomy and adenectomy as being the goal of throat procedures. While these must be prominent in attempts to clear pharyngeal spaces of infection, they do not comprise all that is necessary in many cases. Infection bearing lymphoid tissue in the plica, around the eustachian tubes and more remote recesses, may be and are overlooked in some cases to the detriment of patients and the discredit of the work and the operator. Deep chronic abscesses extending to the digastric fossa in patients who say that they "have not had a sore throat in months or years" may be overlooked and left after a perfect tonsillectomy and an adenectomy which seems to sweep the pharyngeal vault quite clear by usual standards may leave adhesions and pathologic areas in fornices only possible to be reached with changed positions and instruments under direct guidance of the educated finger or vision.

Case reports.

Discussant: K. T. Brown, Muncie.

3. G. W. SPOHN, Elkhart.
   Subject: Eye Drainage.

Abstract.—Definition. Descriptive anatomy and physiology. The need of a drainage system as well as a system of sewerage. Occlusion of the punctum, the lachrymal or nasal duct. Etiology of occlusions. The more common pathological conditions of the drainage system. The constant passing of probes for dilation on a par with Politzerization of the tympanum of the ear.

Prognosis dependent upon the reserve, the vitality or the reconstructive power of the patient.

Treatments.

Conclusions.

Discussant: C. Norman Howard, Warsaw.

REPORT OF THE SECRETARY

House of Delegates, Indiana State Medical Association:

Gentlemen: I beg to report that so far this calendar year there have been 2,588 paid-up memberships in the Association, an increase of seventeen over the corresponding time for last year. In another column of this issue of THE JOURNAL you will note that this increase is not distributed evenly over all the councilor districts, some districts being much behind last year's quota and some being in excess of last year.

Our delegate to the St. Louis session of the American Medical Association, Dr. George F. Keiper, reports that he presented the name of Dr. G. W. H. Kemper of Muncie to the House of Delegates of the American Medical Association, and, that since Dr. Kemper had complied with all requirements, he was elected to Affiliate Fellowship in the American Medical Association, an honor but rarely conferred upon our members.

Respectfully submitted.

CHARLES N. COMBS, Secretary.

REPORT OF THE COMMITTEE ON ADMINISTRATION AND MEDICAL DEFENSE, INCLUDING REPORT OF THE TREASURER

House of Delegates, Indiana State Medical Association:

Gentlemen: You will remember that in last year's report mention was made of the fact that all cases acted upon by the Medical Defense Committee are given a serial number so that reference may be made to individual cases without mentioning any names.

One year ago in our report to the House of Delegates, there were seventeen cases pending in the hands of the Committee. Following is the detailed progress of these cases during the past twelve months:

No. 67 Still pending.
No. 68 The appellate court reversed the decision of the lower court so that it is now in favor of the defendant. However, the case will go before the Supreme Court for final decision.
No. 73 The Supreme Court affirmed judgment of $500.00 against defendant. Cost to Association, $88.50.
No. 83 Still pending.
No. 85 Never came to trial.
No. 86 Dismissed on account of lack of evidence.
No. 90 Verdict for defendant.
No. 92 Still pending.
No. 94 Settled out of court. No expense.
No. 96 Still pending.
No. 98 Never came to trial. No expense.
No. 99 Thrown out of court. No expense.
No. 100 Still pending.
No. 102 Thrown out of court. No expense.
No. 103 Verdict for defendant.
No. 105 Verdict for defendant. Expense $265.00.
No. 106 Still pending.

Since September 1, 1921, there have been referred to the Committee eight new cases, and the status of these cases is as follows:

No. 107 Pending.
No. 108 Pending.
No. 109 Member died March, 1922. Expense $50.00.
No. 110 Pending.
No. 111 Pending.
No. 112 Pending.
No. 113 Not entitled to defense. No expense.
No. 114 Pending.

This leaves fourteen cases in the hands of the Committee, Nos. 67, 68, 83, 92, 96, 100, 106, 107, 108, 109, 110, 111, 112 and 114.

In the financial report, you will note that the expense of the Committee so far this year has been only $315.00. For the time being at any rate, the Committee stands justified in continuing its present policy as to attorneys. A few years ago our attorney's salary alone was $1,500.00 a year in addition to other expense. Indiana is remarkably free from malpractice suits. Contrasting with our $315.00 is the statement that in Iowa last year the Association spent $5,000.00 for attorneys' fees alone.

The remaining members of the Committee wish to pay their sorrowful tribute to the memory of one whose name is signed below. Dr. Frank B. Wynn has been a member of this Committee since 1917, and a very large share of the success in the administration of the affairs of this Committee is due to his earnest and untiring efforts.

FINANCIAL REPORT

Medical Defense Fund.

Receipts:

Balance on hand at last published report, January 1, 1922		$ 587.91
Medical Defense Apportionment, 2,588 members at 75 cents each		1,941.00
Liberty Bonds		5,000.00
Total		$7,528.91

Disbursements:

Case No. 105	$265.00	
Case No. 109	50.00	
Total		315.00
Balance on hand Sept. 1, 1922—Cash		$2,213.91
Liberty Bonds		5,000.00

The report of the Treasurer is as follows:

Receipts:

Balance on hand last printed report, January 1, 1922		$ 9,016.86
Membership dues (2,588 members)		10,352.00
Sale of furniture		155.00
Total		$19,523.86

Expenditures:

THE JOURNAL, $2 per member	$5,176.00	
Medical Defense Fund, 75c per member	1,941.00	
Secretary's stenographer	511.50	
Postage and Incidentals	72.96	
Printing	191.77	
Typewriter	102.50	
Councilors' expenses	66.68	
Legislative Committee	519.75	
Bonds for Treasurer	56.00	
Balance due Claypool Hotel	15.00	
Storage of furniture	36.94	
Total		8,690.10
Balance on hand Sept. 1, 1922		$10,833.76

Respectfully submitted,

CHARLES N. COMBS, Treasurer.
E. M. SHANKLIN, Chairman.
GEORGE R. DANIELS.
FRANK B. WYNN*.

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION

House of Delegates, Indiana State Medical Association:

Gentlemen:

1. *Medical Education in America.* Perhaps the most outstanding change in Medical Education in the past year is the emphasis placed on Hygiene and Preventive Medicine. Courses three times the length of former courses have been arranged in most schools while a few schools are offering courses for those having the M.D. degree and requiring two to three years for their completion.

It seems probable that the low ebb in medical school enrollments has been reached and passed. Throughout the country there is an increase in freshman medical enrollments.

2. These general tendencies are noted in our own medical school. The course in Hygiene has been increased to about one hundred hours. The freshman medical class last year was the largest since the adoption of the two-year collegiate work for entrance. There were 112 in last year's freshman class. It has been necessary this year to increase the scholarship requirement in premedical work with the object of preventing matriculation of the poor or lazy student instead of carrying him for a year and having to fail him at the end of a year.

*Deceased.

The progress of the Riley Memorial Hospital and the need of a Psychiatric Hospital are outstanding features of Medical Education of Indiana.

Respectfully submitted,

BURTON D. MYERS, Chairman.

REPORT OF THE COMMITTEE ON HOSPITAL STANDARDIZATION

House of Delegates, Indiana State Medical Association:

Gentlemen: No systematic hospital survey of the State has been made this year. It was not deemed advisable on account of the expense in money and time. In addition the various hospitals are known to be in fair to good condition; some are in excellent physical and scientific standing.

St. Elizabeth's Hospital (Lafayette) has been admitted to the approved list for interne training by the A. M. A. Committee; several other Indiana Hospitals will be recommended for similar accredited standing during the next year. Improvement is noted all along the line.

Respectfully submitted,

ALBERT E. STERNE, M.D., Chairman.

ABSTRACT OF REPORT OF COMMITTEE ON AUTOMOBILE INSURANCE

House of Delegates, Indiana State Medical Association:

Gentlemen: Work of the Committee, based on the fact that the doctor should be a preferred risk for automobile insurance. Usual rates on automobile insurance prohibitive. The Committee seeks to obtain insurance for members of the Medical Association, the rates proportionate to the moral hazard and the actual risk.

Three procedures considered, to-wit: One, insurance with standard stock companies. This was unsuccessful as no concessions would be made by stock companies on account of dis-organization of their agency force. Two, the organization of a stock company or a reciprocal association within and for the Medical Association. This was found to be impracticable by reason of lack of time and the legal requirements covering the situation. Three, the execution of a contract between the State Medical Association and some reciprocal organization for the writing of individual policies at just and proper rates. Legal opinion was necessary to show the rights and liabilities of policyholders in a reciprocal organization. Firm of Emison & Hoover employed to render legal opinion covering the entire subject of automobile insurance.

Abstract of Attorneys' Opinion: Review of entire subject of Inter-Association Insurance. Legal requirements on Attorney-in-Fact. Attorney-in-Fact is sole negotiator. He represents the policyholders in his relation with other policyholders. His powers limited by articles of agreement. Method of organization of a reciprocal concern. The expenses of the office maintained by the Attorney-in-Fact is the sole expense with such insurance, other than losses. Liability of policyholder: This is governed by the law of Indiana as interpreted by the Attorney General on September 1st, 1921, as not exceeding that which is specified in the original association agreement. It is a several liability which can be limited as the subscribers see fit. Legal disadvantages: This consists in the fact that legal services can be had on any subscriber if the Attorney refuses to appear in defending the suit, but the subscriber has recourse against the Attorney. In the opinion of the legal authority, this is only a theoretical disadvantage as the Attorney-in-Fact would undoubtedly appear. Discussion of mutual insurance which operates under the law of 1915. Permission by statute to reinsure.

Requirement that the cash premium must be expressed in the policy. Certain requirements and limitations placed upon the corporation by law. Legal requirements as to admitted assets. Rights and liabilities of the insured: Provisions of statute for cancellation or forfeiture of policy. Payment of premium is a question of contract. Mutual or reciprocal insurance a question of contract. The insured is liable for such assessment as may result from liability or accidents which occur during the life of his policy.

Offer of the Standard Auto Insurance Association found to be the lowest and best offer. Submitted in full in the report. Standard Auto Insurance Association a reciprocal concern under laws of Indiana, with firm of Bainum-Phillippe Company as Attorney-in-Fact with central office at Vincennes, Indiana. Sworn statement from the Bainum-Phillippe Company showing the stockholders of that concern. Investigation by Committee shows that the stockholders of the Bainum-Phillippe Company are men of integrity, business ability and financial stability, with a satisfactory reputation where they are known.

The Committee recommends that the State Medical Association enter into an agreement with the Standard Auto Insurance Association for the writing of individual policies in accordance with the proposal of Standard Auto Insurance Association. The Committee further recommends that a committee be appointed by the State Medical Association for the ensuing year for the purpose of maintaining a connection between the State Medical Association and the Standard Auto Insurance Association and to continue during that year to have the subject of automobile insurance under consideration.

Respectfully submitted,

JAMES N. McCOY, Chairman.

REPORT OF COMMITTEE ON SCIENTIFIC WORK

House of Delegates, Indiana State Medical Association:

Gentlemen: The scientific program prepared for this session constitutes the report of your Committee on Scientific Work.

Respectfully submitted,

LARUE D. CARTER, Chairman.

REPORT OF COMMITTEE ON ARRANGEMENTS

House of Delegates, Indiana State Medical Association:

Gentlemen: On Wednesday evening there will be a smoker at the New Hotel Roberts that promises to surpass any smoker that has ever been given by the society entertaining the State Association. Some real stunts have been provided and an entertainment that is well worth the time of any physician in the state to attend has been arranged. We feel sure that this will be, from the standpoint of entertainment, the most valuable part of the session at Muncie.

On Thursday evening there will be an open meeting for doctors and their families, and also the general public is to be invited, at the High School Auditorium. At this meeting there will be, first, a musical program, from 8:00 to 8:30, and at 8:30 Dr. W. A. Evans of Chicago, who has the Health Column of the Chicago Tribune, will deliver a popular address. This entertainment will be broadcasted by the Muncie Press Broadcasting Wireless Station. This station operates on 355 meters and should be heard at least all over the state.

The Local Committee on Arrangements felt that the above plan of entertainment on Thursday evening would be more profitable than attempting to stage a banquet at which a scientific program was provided, as the ladies, no doubt, will be more interested in a subject such as Dr. Evans can so ably present than they would be in a scientific program. Also, it will give the public a chance to become better acquainted with medical ideals, and this, it occurred to us, is very essential at this time.

The following program has been arranged for the pleasure of the ladies attending the State Medical Meeting, and we would appreciate it if the doctors will communicate with the Local Committee on Arrangements and let us know how many ladies will accompany them, so that we can have some idea as to the number for which we should prepare.

Wednesday evening the ladies will be entertained at the Wysor Grand Theatre by moving pictures and vaudeville. The management of this theatre has assured us that they will make special efforts to arrange a program that will be very suitable for this occasion. Thursday noon a luncheon will be served at the Delaware Country Club, after which there will be a musical in the afternoon. Thursday evening the ladies will be expected to attend the public meeting at the High School Auditorium, at which Dr. Evans will speak. Friday, at 10:00 a. m., there will be an automobile ride over the city, visiting the places of interest. Some of the places which will be visited are as follows: Ball Brothers Fruit Jar Company, General Motors Corporation, parks, Indiana State Normal School, Durant Motors, etc. Twelve to one will be spent at "Wild Banks" Farm, the country home of Dr. and Mrs. C. M. Mix of this city, returning to the Hotel Roberts at 1:30. The committee in charge of the ladies' entertainment is as follows: Mrs. I. N. Trent (Chairman), Mrs. L. L. Ball, Mrs. Earl Green, Mrs. U. G. Poland, Mrs. C. E. Miller, Mrs. C. M. Mix and Mrs. S. G. Jump.

The Local Committee also urges that the various medical fraternities, class reunions, etc., be held either on Thursday or Friday noon, and if any such luncheons are being planned we will appreciate it if they will get in touch with us *immediately* so that we can make the necessary reservations at the hotels.

A golf tournament is being arranged for and we would appreciate it if any doctor who cares to play golf while he is here attending the State Medical Association meeting, or even cares to enter the tournament, will get in touch with either Dr. F. G. Jackson or Dr. C. A. Leatherman of this city *immediately*, who have this matter in charge.

On Thursday evening there will be dancing for all who care to indulge at the Hotel Roberts, after Dr. Evans's address, as late as they care to dance.

Respectfully submitted,

B. R. KIRKLIN, Chairman.

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

House of Delegates, Indiana State Medical Association:

Gentlemen: Your committee having to do with Legislation and Public Policy desires to make the following report:

No Legislative activities are reported for the reason that the Legislature has not been in session for more than special and specific purposes during the life of this committee.

Your committee would recommend to this Association that it at once take steps to better organize the profession, in defense of its own ideals, that a much larger number of the profession in the state be brought into the fold of this organization, and especially that it adopt means of bringing the profession into a much closer relationship to the public.

FRANK W. CREGOR, Chairman.

THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION
Devoted to the Interests of the Medical Profession of Indiana
ALBERT E. BULSON, JR., B.S., M.D., F.A.C.S.
Editor and Manager

Office of Publication, 406 W. Berry St., Ft. Wayne, Ind

SEPTEMBER 15, 1922

EDITORIALS

OUR PRESIDENT

William R. Davidson, President of the Indiana State Medical Association 1921-1922, was born in Evansville, Indiana, in 1875, of Scotch descent. His early education was received in the Evansville schools. He graduated in science from Wabash College, Crawfordsville, in 1896, and immediately thereafter entered Rush Medical College, Chicago, from which he received his medical degree in 1899, beginning the practice of medicine at Evansville at once, where he has continued to practice up to the present date. Post-graduate work was taken at Harvard Graduate Medical School, and New York post-graduate schools.

Dr. Davidson was one of the original members of the Board of Councilors of the Indiana State Medical Association when first organized, and later served as vice-president of the Association. He is a Fellow of the American College of Surgeons; charter member of Evansville Rotary Club; member of all Masonic bodies; past commander Knights Templar; and member of numerous local clubs. During the World War he served in France as Chief of Surgical Service, Base Hospital No. 120.

In 1905 Dr. Davidson was married to Miss Helen M. Chick, of Boston, Massachusetts. They have one son, Donald, fifteen years of age, now a senior in Central High School, Evansville.

Dr. Davidson has been associated in the Walker Hospital with Dr. Edwin Walker and Dr. James Y. Welborn since 1905, and since the death of Dr. Walker recently, has acquired an interest in the hospital.

The Indiana State Medical Association is fortunate in having so worthy a President, and we anticipate that this annual session, under his leadership, will be one of the best in the history of the Association.

UNETHICAL ADVERTISING

Since the publication of the July number of THE JOURNAL, in which we discussed briefly the subject of unethical advertising on the part of physicians, we have received a number of letters from readers touching upon the subject. Some of the letters heartily commend the suggestion that something should be done to check the tendency on the part of many doctors to unethically advertise themselves, while other letters are from writers who apparently desire to apologize for their own actions by putting forth unfounded claims that practically all doctors advertise unethically. A few of the correspondents make the bold, indefensible and untrue statement that *all* of the leaders in the medical profession are guilty of newspaper advertising. Aside from the letters concerning the matter, we have been fairly deluged with newspaper clippings which really show to what an extent the practice of many medical men in securing newspaper publicity has extended.

In carefully analyzing the correspondence, and especially the newspaper clippings, we find that in the main the men who try to boost themselves by newspaper publicity are residing in the smaller cities and towns, and that even there it is confined to one or two men in each locality. In making this statement we are not unmindful of a few breaches of professional ethics, to say nothing of acts that are in exceedingly bad taste, as seen in the newspaper and magazine write-ups of a few of the so-called "clinics" in Indiana. A striking example of this is the laudatory illustrated write-up of one of the Indiana "clinics" in the August number of the *American Magazine*, and almost a duplicate of the same as sent out by one of the press associations and reproduced in many of the daily and weekly papers of the country. Aside from this some of the so-called "clinics" have been featured in the photogravure sections of Sunday papers and written up as special articles for various lay and religious papers. Also, some of the clinics have not hesitated to mail out broadcast to the laity illustrated brochures picturing elaborate offices and mentioning the various paraphernalia employed and recounting the unusual qualifications and skill of the various members of the "clinic".

The whole thing is more or less nauseating, and so smacks of commercialism of the rankest sort that it is no wonder that those men in the medical profession who do not resort to such unethical practices, and there are many such, feel grieved that their confreres will stoop to such practices. It is idle talk to say that the leaders in the medical profession resort to or ever did resort to unethical newspaper advertising to further their own ends, for while now and then one of the leaders may have been guilty of such practices in his younger days, yet we venture the assertion that for the most part very few of them are guilty. As young and struggling men in the medical profession they followed the straight and narrow course, and they are doing so yet, just as hundreds of younger men in Indiana are doing now. However, it is a little discouraging for the younger

men, who want to be honest and want to be ethical, to note the frequency with which some of the older men are guilty of breaches of ethics and decency.

As we already have stated in previous editorial comments on this subject, it is time to live up to our standards of conduct or else have no rules and let every man do as he pleases whether his conduct meets the approbation of his confreres or not. It may not be possible to control the action of patients, who in rare instances desire to parade their ills and the names of their doctors in the daily papers, and especially is this true when patients reside at a distance and give their news items to their home papers. However, as we have stated many times, there probably isn't a newspaper editor and proprietor in the country who will not respect the wishes of medical men and refrain from publishing the names of doctors in connection with medical and surgical cases if requested to do so. The better class of people in every community know that a doctor is "tooting his own horn" when they see that doctor's name appearing repeatedly in the lay papers in connection with the treatment of patients, and the practice of seeking such notoriety is looked upon unfavorably by the class of lay persons whose good opinion every reputable doctor should court. The so-called "clinics" are no better than individuals when they resort to the kind of magazine and newspaper publicity to which our attention has been directed quite recently and referred to in this editorial comment.

The propriety of advertising of various kinds is covered by the new code of ethics from which we again quote:

"Solicitation of patients by physicians as individuals, or collectively in groups by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. That does not prohibit ethical institutions from a legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other self-laudations defy the traditions and lower the tone of any profession, and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not *per se* improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulating such cards.

"It is unprofessional to promote radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of diseases; or to employ any methods to gain the attention of the public for the purpose of obtaining patients."

As a solution of the problem occasioned by the growing tendency on the part of many doctors, especially in small towns, to seek newspaper publicity and notoriety, we suggest that the Indiana State Medical Association adopt a resolution in which unethical newspaper advertising is condemned as being distasteful to the medical profession, and politely requesting the newspaper editors or managers of the state to refrain from publishing the names of doctors in connection with medical and surgical cases. Such a resolution should assure the editors that medical men at all times will furnish the newspapers with such facts as the public ought to know. However, the giving out of such facts does not constitute a breach of ethics or propriety which every doctor is bound to respect. This resolution should be sent to every lay periodical in the state, and we venture the assertion that there isn't a newspaper editor or manager in the state who will not respect the request that is made.

Certainly it is time to do something to curb the tendency toward the rankest kind of commercialism on the part of many medical men. Already we are threatened with annihilation by so many things from without that it seems unnecessary to dwell upon the necessity of correcting the evils from within, but we must bring our medical men into closer harmony, and to a realization of the fact that we are practicing a profession and not a trade. If we cannot sustain the principles and traditions of the profession, then we deserve to perish.

THE RETIREMENT OF DR. HURTY

After more than twenty-five years of long and active service as a health commissioner for Indiana, Dr. John N. Hurty voluntarily retires and has been succeeded by Dr. William F. King, who for twelve years has been Dr. Hurty's assistant. Dr. Hurty's administration has been characterized by vigorous enforcement of the health laws, and by an effort for the betterment of public health and sanitary conditions in Indiana which has placed the state in the front rank of those that appreciate the value of public health work. Many complimentary things have been said concerning Dr. Hurty's work as a public health official and he is deserving of all of the praise that has been accorded him, not only in this state but in other states as well. Always active and pugnacious, though not always tactful, he sometimes has made enemies through his conduct and the tenacity with which he has stuck to a given course of action which he thought was right, but in the end he nearly always has secured endorsement and praise from even his enemies, as it has been recognized that back of all has been an ability and a purpose which has redounded to the welfare and best interests of the people of Indiana. His service has placed Indiana in a high place among the states that try to solve public health problems;

and it may be safely said that to Dr. Hurty alone is due nearly all of the credit for the protection that has been given the Indiana people in public health matters and for the place that Indiana has been given in public health work.

THE CONDUCT AND POLICY OF THE MAYO CLINIC

As everyone knows, a good deal of criticism of one kind or another has been aimed at the Mayo brothers of Rochester, Minnesota, and lately against the Mayo Clinic. Recently, or subsequent to our editorial in the July number concerning unethical advertising, a number of Indiana doctors have seen fit to say some uncomplimentary and even vicious things concerning the Mayo Clinic in its relation to unethical newspaper publicity. We are not interested in the Mayo Clinic in any way whatsoever, but we are interested in the question of fair play and we resent the charge that the Mayos or any considerable number of the prominent members of the medical profession are guilty of anything that can be construed as unethical or in the slightest degree tinctured with the rank commercialism about which we have complained and which we shall continue to complain. The trouble of it is there are altogether too many medical men who will make malicious and unsustained accusations concerning confreres of whom they are jealous because such confreres possess more attainments and have made greater success in the profession; or in attempts to defend their own misdeeds they try to make out that everybody else is as bad as they are. Some of the Indiana doctors have freely charged that the Mayos are the rankest kind of advertisers, that they are fee dividers and are guilty of all kinds of unethical conduct. All of this is untrue and is so palpably false and inconsistent as to merit no answer on the part of those who are being accused. The fact of the matter is the Mayo brothers will challenge any person to produce the slightest evidence that either of them or anyone connected with the Mayo Clinic has been guilty of unethical conduct.

In this connection it may be well for our readers to know that the Mayo Clinic is not a personal business conducted by the Mayo brothers, but is an institution. Its funds and properties are controlled by a board of nine trustees, and its professional control is through a council of eleven members, six elected by 121 members of the permanent staff and five appointed by the board of trustees. No person directly profits from the clinic except as paid a salary. Any residue after salaries have been paid is added to the permanent endowments. The Mayo Clinic, while conducted along the highest ethical standards also is conducted in a businesslike way which might well be imitated by other professional men. In fact the medical profession should be thankful that the Mayos have not been influenced by any maudlin sentiment nor exercised any unfair business tact in order to increase the amount of their work or income, and, while at all times bestowing charity where charity is due, they have not been guilty of pauperizing the community as is the case with some of the large clinics in our cities. In fact the Mayo Clinic issues a printed statement of which the following is a copy:

"1. Every patient who comes to the Clinic receives the care and attention necessary without regard to financial status, social condition, race or creed. What he receives is measured by his necessities, not by his ability to pay. While the Clinic is ready and willing to give freely of its services to the worthy poor, each patient who is able to pay a fee is required to do so. The hospitals in Rochester are not owned by the Clinic although under its medical and surgical direction. Every patient must be provided with money for his maintenance, hospital expenses and transportation.

"2. All the moneys that are received by the Mayo Clinic, beyond a reasonable and just return to its staff, are used to create endowments the income of which shall be devoted perpetually to the relief of human illness, to the advancement of research as to the cause and prevention of disease, and to medical education and such other welfare movements as are correlated with health problems.

"3. The Mayo Clinic, its endowments, physical equipment, lands and other properties, are held by trustees in perpetuity for the sick of this and future generations."

We do not think that the Mayo Clinic needs any defense, in fact we believe that other "clinics" could well follow the Mayo Clinic in its business and ethical conduct even if not duplicating the quality of service rendered, but we believe that something definite should be said in answer to some malicious charges that have been made by a few Indiana men who, while free to condemn, have not been able to offer acceptable proof.

USELESS COMMITTEES

Ever since the organization of the Indiana State Medical Association we have tolerated and perpetuated a number of useless committees. This is not saying that the Association as an organization and the individual members of it would not profit through the existence of such committees if they did their work properly, but the fact of the matter is those committees, with but one or two exceptions, have failed absolutely to do anything worth while, and so far as their usefulness is concerned they might as well not have existed. It takes a charge of dynamite to make some of the committees functionate, and we might as well have committees to procure Pierce-Arrow motorcars for the inhabitants of Mars as to have some of the committees that we have now. Every year the secretary of the Association asks the chairmen of committees to get their reports ready for presentation at the annual session and to have the same published in the presession number of THE JOURNAL. Through the year most of the

committees exist only on paper, and at the eleventh hour each chairman usually after much urging prepares a perfunctory report, based on little thought and less action on the part of the committee, and the same is perfunctorily approved by the House of Delegates and that ends the matter. Occasionally a committee like that on Public Policy and Legislation really does some work, but such a condition of affairs is due to a chairman who is devoted to the interests of the Association and who is willing to give his time and his attention to the work that has been assigned him. Dr. W. N. Wishard, for many years the chairman of that committee, deserves unstinted praise for the work that he has done for the Association, and the work has not been done without great effort and much sacrifice of time. His committee is about the only one that ever has done any real work, and the report of which was worth the effort put forth to prepare it. This brings up the question of the appointment of the committee members. Presidents cannot be too careful in the selection of those who are to act upon important committees, for a drone as a chairman of a committee may nullify absolutely the effects of such committee. Men should be selected for the committees because of their peculiar qualifications for membership on those committees and their willingness to work. The few committees which our Association has at the present time really are needed, but most of them could be abolished if we are to judge from the amount and character of work that they have done during the last few years. By all means let us have some sort of an awakening on the part of those who are representing the Association on important committees or else do away with the committees entirely and save time and worry.

THE GORGAS MEMORIAL

The American Medical Association, through a special committee, is making an appeal for funds to be used as a fitting memorial to mark the humanitarian services of the late General William C. Gorgas and his beneficent influence upon the life and work of mankind throughout the world. It has been decided that this memorial shall take the form of a scientific institute for the study of tropical diseases and preventive medicine, and Panama City has been selected as the place for that institute. The plan is to build at Panama an institute for the study of tropical and infectious diseases, with a hospital, laboratories, departments for research and all other facilities required in an institute of this character erected and administered according to the most progressive, modern ideals. The government of Panama has donated the great Santo Tomas Hospital, and also the ground on which it is proposed immediately to construct the buildings as they have been described. In conjunction with this work in Panama there will be established in Tuscaloosa, Alabama, the Gorgas School of Sanitation for the purpose of training public health workers, sanitary engineers and public health nurses, especially educated to deal with the problems peculiar to the Southern states.

An endowment of six and one-half million dollars will be required to enable the commission to carry on the plans which have been formed. The physicians of our country and especially the members of the American Medical Association surely will not disregard the memory of a former president and one who has done so much for the welfare of the people of the whole world in tropical and semi-tropical countries and in all places subject to the inroads of infectious diseases. The campaign for funds is to be international. A large response is expected from North, Central and South America, since the nations of these countries have been the chief beneficiaries of the labors of General Gorgas. It is fitting that his co-workers of the American medical profession should be requested to respond generously to this appeal. It is hoped that every member of the American Medical Association will make as liberal a subscription as possible. Any sum will be gratefully accepted. Checks should be drawn to the order of the "Gorgas Fund" and should be mailed to the American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

The Time—Wednesday, Thursday and Friday, September 27, 28 and 29th.

The Place—Muncie.

The Event—The annual session of the Indiana State Medical Association.

INDIANA roads were never better. Railroad and interurban service was never as bad. Why not go to the Muncie Session by automobile. If you do not know the way, ask a representative of the Hoosier Automobile Association or consult any good road map.

A CHIROPRACTOR baby specialist is a new one in the field of special practice, as evidenced by the advertisement of a chiropractor who is locating in one of the central Indiana cities. It is bad enough to punish adults by the pulling and mauling of chiropractors without subjecting babies to such maltreatment.

THERE is no reason why the "clinics", or group practice of any kind, should not conform to the restrictions governing the individual physician so far as ethics are concerned. To resort to commercial practices in soliciting or in the securing of patients, whether through unethical newspaper advertising or in any other way, should not be condoned in them any more than it is condoned in the individual physician.

THE smoker on Wednesday evening at the Hotel Roberts, according to the announcement of the Committee on Arrangements for the Muncie session of the Association, promises to surpass any smoker that ever has been given by a society entertaining the Association. Some real "stunts" have been provided, and an entertainment that is well worth the time of any physician in the state to attend has been arranged. Members are urged to come to Muncie early in order that they may not miss this treat.

WITH the opening of the schools in the fall there comes the usual increase in the number of communicable diseases among children. Much can be accomplished in stopping the spread of disease by careful school inspection, but we have no patience with the inspection that occurs in some schools where so-called nurses and others who have never had any medical training are given the responsibility of the inspection. Incidentally it is time to preach the value of vaccination not only against smallpox but diphtheria as well.

LAY control and dictation of the management of the institutions in which medical men are interested directly or indirectly is bound to come unless something is done to prevent it. Not alone this, but lay control of everything pertaining to the practice of medicine eventually will come unless the spineless doctors who fail to see the growing tendency of the times awaken to the danger and put on their fighting clothes in an attempt to save a reasonable amount of independence for themselves. This is no idle dream, and those who think differently will have occasion to learn the truth perhaps when it is too late.

IT is charged that the state journals, including their editorial policies, are controlled and dominated by the American Medical Association. Nothing can be further from the truth. We can name two or three state journals that are not only independent in thought but usually opposed to many of the A. M. A. policies and do not hesitate to say so. Even this JOURNAL declines to receive dictation from anyone, and the A. M. A. office in Chicago never has and never will influence the editorial opinions unless such influence is in keeping with the ideas of the editor and the members of the council who are responsible for the publication.

THE Physicians' Protective Association of Buffalo, made up of 450 of the 857 physicians in that city, is carrying on an energetic fight against the pauperization of the public through free medical services in local hospitals. Abuses are tolerated under the mask of public health and the Buffalo physicians believe that it is time to put a stop to the practice of making dependents and paupers of people who are able to pay something for the services rendered. The question concerns the public more than it does the medical profession, for no community can afford to tolerate widespread and unnecessary pauperization in the form of any kind of unnecessary free aid.

THE Muncie medical profession is composed of a live bunch of men. They are doing things in a medical way, and on the surface they seem to be working in perfect harmony. They extend an unusually cordial welcome to those who will attend this year's session of the Indiana State Medical Association, and much is promised in the way of enthusiasm and entertainment. Anyway, the scientific program is not the greatest attraction offered by our annual sessions. The spirit of good fellowship and the opportunity to get acquainted with one another is worth much in stimulating cooperation and harmony among the medical men of the State, and the Muncie medical men are going to help along this spirit.

THE chiropractors held a convention in Fort Wayne the last week in August. They advertised the event extensively in the newspapers and by placards which were posted in conspicuous places, to say nothing of a parade headed by a band, through the principal business streets. The whole thing reminded us of a one-ring circus, monkeys and all. The program for this convention, as published in the newspapers, showed that the chiropractors do not discuss diseased conditions, and cause and treatment, but they do discuss such questions as how to advertise and how to get the money, thus showing, as is well illustrated by their catalogs and other literature, that chiropractic is a business and not a profession.

IN his presidential address at the St. Louis session of the A. M. A. Dr. George E. de Schweinitz said some pertinent things concerning the necessity of acquainting the public with the aims and objects of the medical profession and, in commenting on this, a pastor of a leading St. Louis church says "to educate public opinion is a painful duty but it is one that must be faced and each of the great professions has its allotted task in keeping the public well informed on the subject on which it can speak with authority. * * * Does the medical profession as a whole take its proper part in guiding and influencing public opinion in those matters wherein it alone can speak with authority?"

MEDICAL specialists of one kind or another are getting so numerous that in a short time there will be no old fashioned general practitioners. It wouldn't be so bad if the specialists were all qualified, but unfortunately a large proportion of the so-called specialists are unscrupulous and unqualified. The American College of Surgeons is supposed to discriminate between the qualified and unqualified surgeons but has failed to do so in many instances. The time will come when societies will have a house cleaning and show up the untrained specialists. Already some of the societies composed of specialists have drawn the line, but the trouble of it is before they drew the line a lot of ill-trained men gained membership. There are hosts of other untrained men who never will make application for membership in such societies and probably do not care to do so.

WE still receive newspaper clippings from Elwood indicating that the name of one of the doctors there, president of the county medical society, appears in the daily papers every day or so in connection with a report of medical and surgical cases, and we have been asked by other doctors, "What is the State Medical Association going to do about it?" As a matter of fact, the State Medical Association will do nothing about it, for each county medical society is the judge as to the qualifications of its members, and not only approves but censors the conduct of its members. If the county medical society is satisfied that one of its members is so guilty of unprofessional conduct that he should be punished for the offense, then it is up to that county medical society to bring the offending member before the society to answer charges and receive such sentence as the majority of the members of the society may think indicated after the facts have been presented and properly analyzed.

AS will be noted in the treasurer's report published in this number of THE JOURNAL, the Indiana State Medical Association now has about ten thousand dollars in the treasury. By all that is good and holy let us not look upon this plethoric purse with covetous eyes if we have any impractical schemes which need funds in order to carry them to successful fruition. If we are going to appropriate any money for anything outside of the legitimate expenses of the Association why not give something to the Committee of Public Policy and Legislation with instructions to get busy promoting wise medical legislation in upholding our present standards of medical education and licensure. Furthermore, this same committee could with propriety start a campaign which would have as its object the education of the public concerning health matters, and to do this effectually would require some funds. In other words, the medical profession should resort to propaganda, and it will be necessary to do so if we are to offset the effects of the teaching of medical pretenders and quacks who today are spending a hundred dollars to our one dollar for accomplishing ends which are diametrically opposed to all that we teach and practice.

IT cannot be doubted that ignorant people get their medical knowledge from quacks. In its ultimate analysis this is due to failure on the part of the regular medical profession to give the public as much information as it should have concerning the nature, cause and treatment of disease. It is true that boards of health attempt to disseminate knowledge by means of leaflets, and pamphlets, but this does not answer the purpose. What we really need is more dissemination of knowledge through methods that will reach the people who should have the knowledge. Newspapers and other lay periodicals could do much toward educating the public but they cannot do this without being furnished with the proper material, which must come from educated medical men. The *Chicago Tribune*, through its column entitled "How to Keep Well", edited by Dr. W. A. Evans, perhaps has done more to put its readers in possession of good advice on medical subjects than any other single agency devoted to public health work. What a wonderful work could be accomplished if we could induce every newspaper in the country to have such a department as that mentioned and have the same edited by a recognized authority. Here is a chance for the American Medical Association to get busy, and as a suggestion we believe that it is not only possible but highly desirable to have health talks not only syndicated but guaranteed appearance in every newspaper of the country.

WE have been hearing much in the lay press concerning rejuvenation by testicular transplantation and occlusion of the seminal ducts. Probably there always will be a search for some agent which will revive the fading energies of

the human race, and for ages there has from time to time sprung up some presumably magic agent which is heralded as a rejuvenator, later to be proven worthless. As yet it has not been demonstrated that anything will renew sexual vigor which has been reduced as a result of natural processes. The fundamental error in the whole scheme of rejuvenation is the assumption that sexual vigor is dependent upon any one thing. As a matter of fact it is dependent upon a large number of functions operating coordinately with each other, and the effort to restore a single one of those functions without repairing all the others ends in failure. As has been aptly stated, the efforts to rejuvenate old men by the implantation of youthful testicular substances and thus perhaps stimulating only one of the links in the endocrine chain is a good deal like trying to strengthen a wornout chain by inserting one new link. A careful analysis of the cases in which rejuvenation is supposed to have occurred as a direct result of the employment of some of the methods recommended indicates that the questionable rejuvenation is purely psychic and shortlived. Probably through all the ages to come there will be those who will seek the Fountain of Youth, but like Ponce de Leon they will be doomed to disappointment.

IT is reported that Dr. Adolph Lorenz is to return to this country late this fall to resume his work of paying off the debt that he thinks he owes to the American people, by caring for some of the crippled children of this country. Of course Dr. Lorenz need not come to this country to find something to do, for there are plenty of crippled children in his own country requiring such attention as he can give, but in reality the parents of Austria's crippled children cannot pay for the services, and many of those in America for whom Dr. Lorenz renders services are able and do pay handsomely for the services. In fact it is stated on reliable authority that Dr. Lorenz is making a handsome income from his so-called payment of the debt of gratitude to America. However, an analysis of the matter leads us to believe that Lorenz' visit and the widespread newspaper publicity given his work has presented forcibly to the attention of the public at large the presence of large numbers of crippled children and the possibility of giving them relief. As the New York commissioner of health says, "In spite of the fact that the orthopedic hospitals and orthopedic surgeons of New York City enjoy world wide renown, the community has failed to make full use for their cripples of these advantages so easily and freely obtainable." The Lorenz visit has served to bring forth these little sufferers, and once they are located it is hoped that they may be brought to the attention of our surgeons who are as capable as Dr. Lorenz to take care of them.

As can be testified by the educational committee of the A. M. A. no little trouble has been experienced in making those in control of the Rockefeller Foundation understand the attitude of the medical profession toward medical education and the function which medical men should have. Any controversies that have arisen have been due largely to the fact that the Rockefeller Foundation is dominated by a lay element which either cannot or will not consider medical problems in a professional way. Just now the Michigan medical men are up in arms concerning the proposal of the Rockefeller Foundation to establish a separate school of nursing and to create a separate independent profession no longer subservient to the medical profession. The graduates from this school are to be classed as "super-nurses", and their activities are to be directed along the lines of preventive medicine, health clinics, prenatal clinics and public health work, with, as they state, the home as their field of activity. These activities they will engage in without the aid, advice or direction of doctor or the profession. Such a move would deprive nursing education of its most important contact with those whose years of experience qualify them to care for the sick. It also would deprive them of the training and contact which is absolutely necessary for the best results if the patient, the one most concerned, is to be benefited by the enterprise. As understood by some of the medical men of Michigan, the plan as proposed would have a tendency to make the nurses superior to the physician who is responsible for the treatment of the patient, and the views of the medical profession would have no weight in the training of nurses. It remains to be seen whether the University of Michigan, which has been flirting with various schemes that seem to be antagonistic to the highest type of medical education and practice, will "fall" for the plan offered by the Rockefeller Foundation. Perhaps the million dollar fund which accompanies the offer will have a determining voice in the matter.

DEATHS

MAURICE H. KREBS, M.D., of Huntington, died August 17 as the result of an acute attack of heart trouble, at the age of forty-four years. Dr. Krebs graduated from the Columbia University College of Physicians and Surgeons, New York, in 1900. He served in the Spanish-American and World wars, retiring from military service with the rank of lieutenant colonel. Dr. Krebs was a member of the Huntington County Medical Society, the Indiana State Medical Association, the American Medical Association, the Chicago Otolaryngological Society, the New York Ophthalmological Society and had recently been elected to the American College of Surgeons.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers, for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. J. V. REED and family of Indianapolis spent the month of July at Trout Lake, Wisconsin.

DR. EARLE H. MITCHELL has located at Maxwell, Indiana, for the practice of medicine and surgery.

DR. W. F. KING has been named secretary of the state board of health to succeed Dr. J. N. Hurty.

THE Henry County Medical Society held its annual picnic at the Westwood Country Club, Evansville, August 11.

DR. L. F. SWANK has opened an office for the general practice of medicine in the Haynes Building at Elkhart, Indiana.

ST. CLOUD, Minnesota, has been selected as the site for a new $1,000,000 hospital for service men of the World War.

THE Thirteenth District Medical Society held its annual outing September 1 at the Rochester Country Club on Lake Manitou.

DR. JOHN F. SOUTH, formerly of Louisville, Kentucky, has moved to Columbus, where he will take up the practice of medicine.

DR. S. J. STOTTLEMEYER has resumed his practice of medicine at Anderson after living in Texas for the last several months.

DR. JAMES WYNN announces the continuance of his office at 421 Hume-Mansur Building, Indianapolis, for the practice of internal medicine.

DR. E. VERNON HAHN has announced the continuance of his office at 421 Hume-Mansur Building, Indianapolis, for the practice of surgery.

THE Fountain-Warren County Medical Society held a meeting in Attica, August 3. A paper was presented by Dr. A. C. Arnett of Lafayette.

DR. S. R. BOGGESS, formerly of Lawrenceburg, Ky., has moved to Batesville, Indiana, where he will be associated in the practice of medicine with Dr. Carney.

THE State Medical Golf Association will meet and play on the Muncie Course on Wednesday morning, September 27, the first day of the medical meeting.

THE Wabash County Medical Society held a meeting August 15 at Wabash. Papers were presented by Dr. James Wilson, of Wabash, and Dr. F. F. Brown, of Lafontaine.

DR. E. B. ERSKINE has resigned his position as assistant surgeon at the State Soldiers' Home, Lafayette, to become lieutenant in the United States Navy. He has been assigned to the base hospital at Great Lakes.

THE Huntington County Medical Society held a meeting August 1 at the Huntington Country Club. Dr. J. M. Hicks presented a paper on "Diagnostic Value of Pain and Rests in Accidents and Surgical Diseases".

DR. JOSEPH W. SCHERECHEWSKY, assistant surgeon-general, U. S. Public Health Service, has been commissioned to conduct an investigation into the cause of cancer. Headquarters for the investigation will be established in Boston.

AFTER spending several years in Ecuador, South America, as chief surgeon for the South American Development Company, Dr. E. Ray Royer has returned to the United States and will take up the practice of medicine at North Salem, Indiana.

A SCHOOL for the blind, the first of its kind in Armenia, will be opened in Alexandropol by the Near East Relief under direction of Dr. R. T. Uhls, of Kansas City, Mo. The first pupils will be one hundred fifty Armenian war orphans, most of whom are victims of trachoma.

THE Eye Sight Conservation Council of America, New York City, is establishing a special mailing list for writers and lecturers interested in the subject of conservation of vision. Data and materials will be prepared and mailed periodically to persons whose names are on this mailing list.

A SCHOLARSHIP has been established at the Medical College of the State of South Carolina, Charleston, by the American Bronchoscopic Society in memory of the late Dr. Henry Lowndes Lynah. The dean of the medical school has been empowered to award the scholarship to a deserving student.

DRS. C. E. and CARL W. SAWYER have announced that Dr. Howard D. McIntyre and his wife, Dr. Aurelia P. McIntyre, are associated with them at the Sawyer Sanatorium, White

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Armour's Catgut Ligatures, Plain and Chromic, boilable, strong, absolutely sterile, 60-inch, 000 to 4 inclusive.

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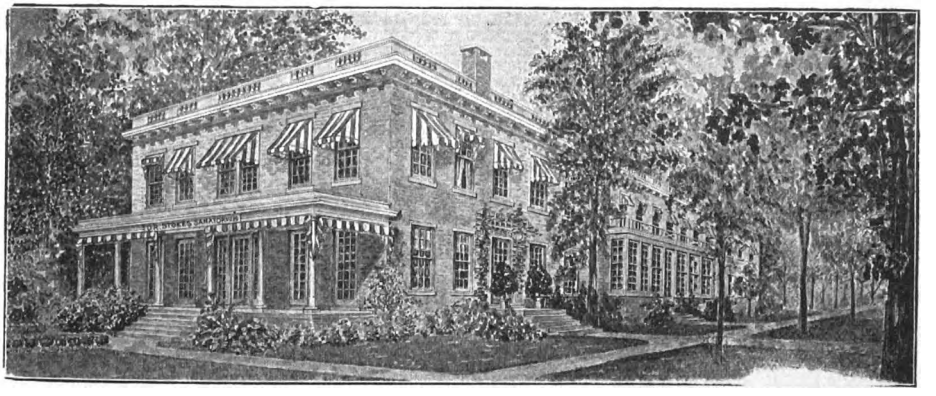
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Two chairs in the University of Cincinnati College of Medicine were founded at a meeting of the board of directors in July, honoring John D. Rockefeller and Andrew Carnegie. The professorship in obstetrics will be known as the John D. Rockefeller Chair of Obstetrics and the professorship in biochemistry will be known as the Andrew Carnegie Chair of Biochemistry.

THE Tri-State District Medical Association will hold its annual meeting at Peoria, Illinois, October 30th, 31st, November 1st and 2nd. Papers will be presented by many of the most prominent doctors of the country. The program committee consists of Dr. Edward H. Ochsner, Chicago; Dr. Walter L. Bierring, Des Moines, Iowa; and Dr. George V. I. Brown, Milwaukee, Wis.

PROFESSOR SCHOEP in the bulletin of the Belgian Chemical Society, reports that the sample of minerals from the Congo yield 424 kg. of uranium and 139 mg. of radium to the ton. Two new kinds of minerals, extremely radioactive, have also been found. One of the minerals has been named "curite" and the other "kasolite" and their crystals are soluble in nitric acid, and the radium salt can be extracted from the fluid without passing through the usual calcination process.

ACCORDING to tables issued by the United States Department of Commerce, the longest lived people in the United States are the Kansans, the expectation of life at birth in Kansas being 59.73 for white males and 60.89 for white females. Wisconsin ranks next with 58.77 for white males and 60.70 for white females. For cities, Washington outranks all others with 53.93 years as the expectation of life for white males and 59.83 for white females. Pittsburgh comes at the foot of the list with 57.15 for white males and 50.42 for white females. Indiana, for males, is eighth in the list of states with 56.84, and seventeenth for females with 57.45.

IN addition to the articles enumerated in our letter of August 1st, the following articles were accepted during July: Intra Products Company—Ven Calcium Cacodylate Ampules-Ipco. Winthrop Chemical Company—Theocin.

During August the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: G. W. Carnrick Co.—Corpus Luteum-G. W. C. Co. Gradwohl Laboratories—Sterile Solution of Mercury Oxycyanide—Gradwohl. Ledelre Antitoxin Laboratories—Pollen Antigens-Lederle, Solution Epinephrine-Lederle. New York Intravenous Laboratory—Loeser's Intravenous Solution of Mercury Oxycyanide. Parke, Davis & Co.—Antipneumococcic Serum (Polyvalent). Winthrop Chemical Co.—Luminal Sodium Tablets 1½ grains.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District—Councilor	No. of Counties	1921 Memberships	1922 Memberships to date	Percentage
1st—Dr. Willis	7	176	175	.99
2nd—Dr. Schmadel	7	149	145	.96
3rd—Dr. Leach	9	130	117	.90
4th—Dr. Osterman	10	138	136	.98
5th—Dr. Weinstein	5	158	160	1.02
6th—Dr. Spilman	8	150	160	1.07
7th—Dr. Earp	4	425	442	1.04
8th—Dr. Conrad	5	172	164	.95
9th—Dr. Moffitt	10	253	251	.99
10th—Dr. Shanklin	5	151	140	.93
11th—Dr. Black	6	191	191	1.00
12th—Dr. Calvin	8	241	247	1.02
13th—Dr. Berteling	8	274	254	.92
	92	2608	2582	

CORRESPONDENCE

THE MAYO CLINIC AND NEWSPAPER ADVERTISING

Chicago, August 2, 1922.

To the Editor:

I have just read with great interest Dr. Reynard's article, "Shall We Advertise?", and your able editorial, "Unethical Newspaper Advertising," in your July issue, and find in both references to the Mayo Clinic.

Permit me to say, I was asked very recently to advertise the "Chicago Great Western Railway" schedule in Medical Journals with the purpose of advising physicians in different states—particularly Kansas, Missouri and Nebraska—how they might put patients on a sleeper at night and deliver them next morning in Rochester, Minnesota. The natural inference of course was that these patients were being sent to the Mayo Institute. But even the railroad authorities refused to have Mayo Clinic mentioned in their advertisements because they knew the Mayos objected to it.

How can physicians use the Mayo Clinic as an excuse for advertising when even railroad authorities know the Mayos decline to have their institution mentioned in general advertisements?

E. WRIGGINS.

Inconsistency?

Fort Wayne, August 10, 1922.

To the Editor:

The article in the July number of THE JOURNAL by E. G. Reynard, of Union City, against advertising, is peculiarly inopportune because of the fact that the current "American" contains a write-up of the Union City aggregation of celebrated specialists, with a life history of each, in which all medical society affiliations are listed and the military record of each emphasized. This material could only have been furnished by the doctors themselves and therefore it makes a travesty of the preachment you publish.

"Consistency, thou art a jewel."

Yours truly,

B. VAN SWERINGEN.

(Dr. Reynard is not a member of the advertising "aggregation" above mentioned, so it seems to us that there is nothing inconsistent in his preachment unless it can be proven that he himself is guilty of the acts he condemns.—Editor.)

Commendation.

To the Editor:

It affords me pleasure to compliment you upon the quality of THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. The original articles are of high grade, but it is in particular the editorials which makes me wish to shake your hand. Were more of the profession willing to fall in line with the ideals set forth in the editorials, I am sure the medical men of the state would occupy a vastly higher and more respectable plane.

Wishing you the success your standard merits, I am,

Respectfully,

E. C. DENNY, M.D.

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OF THE
Indiana State Medical Association

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ISSUED MONTHLY under the Direction of the Council

VOLUME XV
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Entered as Second Class Matter, January 20, 1908, at the Postoffice at Fort Wayne, Indiana, under Act of Congress of March 3, 1879. Accepted for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized October 18, 1918.

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Next Annual Session, Terre Haute, September 26, 27 and 28, 1923.

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2d Vice-President.....John H. Reed, Logansport
3d Vice-President.....Charles S. Bryan, Vincennes
Secretary-Treasurer.....Charles N. Combs, Terre Haute
Editor THE JOURNAL.....Albert E. Bulson, Jr., Fort Wayne

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Medical Section—B. R. Kirklin, Muncie, Chairman; W. A. Hankboner, Marion, Vice-Chairman; C. G. Beall, Fort Wayne, Secretary.

Section on Ophthalmology and Otolaryngology—C. J. Adams, Kokomo, Chairman; Harry Boyd-Snee, South Bend, Vice-Chairman; E. M. Shanklin, South Bend, Secretary (re-elected).

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

For one year (term expires December 31, 1923; Albert E. Bulson, Jr., Fort Wayne; George F. Keiper, Lafayette. Alternates, E. H. Griswold, Peru; Harry Elliott, Brazill.

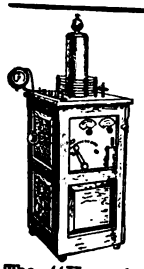
For two years (term expires December 31, 1924): Joseph Rilus Eastman, Indianapolis. Alternate, M. R. Combs, Terre Haute.

COUNCILORS

Chairman—E. M. Shanklin, Hammond.

District	Term Expires
1st—J. H. Willis, Evansville	Dec. 31, 1923
2d—Joseph Smadel, Vincennes	Dec. 31, 1924
3d—Walter Leach, New Albany	Dec. 31, 1922
4th—A. G. Osterman, Seymour	Dec. 31, 1923
5th—Joseph H. Weinstein, Terre Haute	Dec. 31, 1924
6th—Frank J. Spilman, Connersville	Dec. 31, 1922
7th—S. E. Earp, Indianapolis	Dec. 31, 1923
8th—E. M. Conrad, Anderson	Dec. 31, 1924
9th—William R. Moffit, Lafayette	Dec. 31, 1923
10th—E. M. Shanklin, Hammond	Dec. 31, 1923
11th—C. S. Black, Warren	Dec. 31, 1924
12th—W. D. Calvin, Fort Wayne	Dec. 31, 1922
13th—J. B. Berteling, South Bend	Dec. 31, 1923

(Committees for 1922-1923 later.)



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THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY under Direction of the Council ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

OFFICE OF PUBLICATION: 406 West Berry Street, FORT WAYNE, INDIANA

VOLUME XV OCTOBER 15, 1922 NUMBER 10

ORIGINAL ARTICLES

STATUS OF THE INDIANA MEDICAL PROFESSION*

WM. R. DAVIDSON, M.D.

EVANSVILLE, INDIANA

The opportunity during the past year to come in touch with the thought of the profession in Indiana has been unusual. Personal contact and the exchange of letters have shown the interest which the physicians of Indiana are giving to the welfare of their calling. It has been, and should be, a revelation to the thoughtful that the physicians are looking ahead to their advancement. It is fitting that the questions most prominent throughout the state should be brought before this Association for its consideration and for its aid in solving the various problems.

The three points which stand out most clearly during the past year are (1) Education, (2) Professional Relations, (3) Practice of the Various Cults. Our members are keenly alive to these factors which govern them from day to day. Some questions, which it would seem should be regarded as belonging to the past, are still coming up in the life of our members, particularly of those in the smaller towns and rural districts.

(1) EDUCATION. I believe that there exists today as never before a genuine desire for the advancement of medical knowledge. The example set by one of our constituent societies, here in Muncie, has been a brilliant one for all medical organizations. A society in one of the medium-sized cities of our state has organized and carried through a program for the past few years which might well be found in the largest cities of the country. To them have come, from various parts of the country, leaders of professional thought and teaching, bringing modern ideas of diagnosis and treatment. Other societies over the state have made a beginning of similar courses of study. The interest in this during the past year brings up the question if there could not be arranged through the state secretary's office a plan of cooperation in this work. It might be possible to have a speaker spend two or three days or more at frequent times, and several societies working in consonance could profit by his presence.

Again, could it not be possible for the State University of Medicine to arrange for lecturers to make periodic tours of the state? The various colleges of the country conduct community courses in the towns in their neighborhood one afternoon a week for a certain number of weeks. This plan might be worked out in a medical way. It would be more adaptable perhaps to group the state as it is now divided and have district meetings. The course as carried out at Central Hospital this fall is such an example. One almost is envious of the opportunity the men in Indianapolis have of hearing the subject of neurology covered in this systematic method. If this plan, which has been followed so successfully in the past, could be adapted for other parts of Indiana, it would afford the profession an opportunity to be instructed in subjects which to so many are now abstruse. Could not other branches of medicine also, such as internal medicine, pediatrics (including infant feeding, or general dietetics) be carried throughout the state?

I believe that such problems should be worked out by the profession itself. Certainly they should receive the support of it. It is possible that such law as the Sheppard-Towner act was inspired and has been placed on the statute books because of the unconscious lack of interest of the medical profession in the care of the expectant mother.

The subject of pediatrics today is vastly different from that of fifteen or twenty years ago. The teaching is different, the thought is different, yet too many of our members turn to Borden's Evaporated Milk, to Horlick's Malted Milk, to Nestle's Food and other such foods as soon as it becomes necessary to institute artificial feeding. The subject of "summer complaint" or infectious diarrhea is no longer regarded as it was a few years ago, yet the great majority of practitioners cling to the old thoughts because they do not know the modern treatment.

It is through neglect of itself that the medical profession sees the invasion of its rights by

*President's address delivered before the Indiana State Medical Association, Muncie session, September, 1922.

the laity. If such an act as the Sheppard-Towner Act can be enforced, why not other provisions governing other phases of medical life? I regard the proper training of the physician as the one agency to overcome such conditions. It is disheartening to see libraries long out of date, and yet there are too many of these. How many times has this wail been sounded in the past twenty years, yet our members have written and spoken to me during this past year, and have desired that this be brought up in our state meeting for consideration.

(2) PROFESSIONAL RELATIONS. In the past fifteen years it has been a matter of interest to notice the rise and fall of certain of our constituent societies. As in the past, and as it will probably be in the future, the personal idea predominates, and not the professional. As the next session of the legislature approaches it will be necessary to secure the support of our members on certain measures, yet how many will continue to be Republicans or Democrats and not doctors. The provisions of the medical practice act apply to no party, yet men fail to help out by their letters, telegrams or personal word. Certain sections of the statute might well be strengthened. There will be great need for personal endeavor.

The constituent societies are urged to take more interest in their programs of professional relations. The faults of fee-cutting and low prices are surprisingly prevalent, and, as one of my correspondents stated, "the city men do not know how extensively this is done," neither are they concerned—they have their own problems, but they can aid by their influence.

(3) THE PRACTICE OF THE CULTS. There has been no question so widely discussed in person or letter during the past year as this one. Largely due to the advertising skill of one cult, there is great misunderstanding as to why it flourishes. I desire to make clear a few points in the development of these cults.

There are, all together, about thirteen or fourteen different recognized schools or cults of healing. We have seen the coming of the vitapaths, naturopaths, mechanopaths; we have witnessed the rapid rise of the chiropractor; we are now seeing the start in our state of the latest, the napropaths, and doubtless there will be many others. It is perhaps not known to many that recently in one of the counties of the state a prosecuting attorney obtained a grand jury indictment against three irregular practitioners, and at the trials, in spite of favorable instructions, the jury rendered a verdict of "not guilty". Regardless of the evidence and admissions the jury, by Indiana law the judge of the fact and the law, still rendered their verdict in favor of the defendants.

Now why is this? Why does the layman support the irregular practitioner? As a matter of fact he always has and always will. From the earliest days, there has been the antagonism between the recognized, regular physician and the irregular, supported and maintained by the public. It has always been a fact that the regular medical profession is built on a scientific education, a systematic structure, in orderly progress, of all the branches pertaining to a medical education. The cults represent a rebellion at this progress, making a short detour to get into the path of easily earned money.

Barnum said truly, "The public likes to be fooled". We realize this when we see in this day of progress people seeking a "faith-cure" doctor. During the thousands of years disease has been regarded as evil spirits, as the various "humours" which have entered the body. It is not surprising that the thin veneer of civilization still retains a part of the mysticism which pervades humanity. The conception of disease is one which each individual regards as in his own understanding; otherwise, why do we have the Christian Science movement? Later to counteract this, the Emmanuel school, which was to be a part of medicine to treat the neurotic by the power of thought; the various schools which teach that disease is due to the pressure of the vertebra out of alignment; to impingement on the nerves; or as the napropath now claims, to the fact that the "ligaments are too tight" making pressure on the nerves. The bonesetter adjusts; the chiropractor adjusts; the pilgrim goes to the various churches to receive a bath or the laying on of hands, and goes away "cured". Is it not a fact that any layman is ready to make a diagnosis or offer treatment, or urge a "change to a different doctor"? Perhaps this lack of faith in the medical profession has been developed by our own lack of complete attention. In fact, the desire to be sound and strong is the strongest feeling of the individual, and from that comes the groping and wandering in the effort to attain that desire. Lovett of Boston has lately, in a scholarly and fascinating article, traced the rise of quacking, myrical healing and medical cults; and Frothinghan, in the *Atlantic*, recently has discussed these various cults.

It is curious that with the advance of science we have, almost in our generation, seen the fall of a few branches of healing—homeopathy, eclectic medicine, osteopathy—all flourished, then subsided. Why? Because of education. As the newness passed away and they were judged by results it was seen that the basic principles had been ignored and as the education was broadened to meet the need, it approached that of the regular school. Even today the latest, osteopathy, has included in its instruction courses of study which were once derided, and we find that their schools are ranked with those Class C schools, according

to the American Medical Association classification. It would be interesting to trace still further the paths of the irregular cults, but time is limited.

There has been much criticism of the State Board of Examination that there has been no prosecution in an attempt to rid the state of these irregular cults. Is it possible to enforce a law if there is no public sentiment upholding it? In California there have been more convictions than in any other state, yet they still flourish. The whole problem resolves itself into one of education, both on the part of the physician and of the public. The strongest argument we have is that statement made "that scarcely any chiropractor could be found who was a high-school graduate". Publicity as to lack of education, both preliminary and professional, will accomplish far more than prosecution. This means that we must devote more time to calm discussion with the laity and show that salesmanship and advertising do not in themselves give cures. The general public does not understand, and many physicians also.

The law, as it stands today, discriminates in favor of no school; it states what must be the basis for one to engage in the healing art in this state. A license is not a recognition of a school; it is merely a permit to engage in healing, and each day that an irregular practitioner engages in his work he is violating that law. Public sentiment is not upholding this law, and is ever ready to view the medical profession with distrust if it attempts to enforce it.

There is need for us to show the laity what the healing art is; what disease is; how it acts; how it is relieved; and how the public suffers from lack of proper attention. The patient with carcinoma of the breast or of the uterus is adjusted until the disease has become inoperable; the patient with incipient tuberculosis is allowed to become bedfast before a true diagnosis is made—then, and only then, can a sentiment be created in that circle which demands proficiency.

I believe the time has come for this association to be more active in its work. The public is eager for knowledge along the lines of true medicine. Our guest, Dr. Evans, is today doing a splendid work, and presents the best thought in his daily columns. There are other writers who have their articles published by syndicates —yet they do not reach the mass of the people in our state. A systematic campaign can be put forth by speakers or by the press. Any work along this line should come from this association, through its secretary. When the Indiana State Medical Association created the office of Executive Secretary (which was later abolished) it had some indefinite idea of this kind. With the proper man working as an assistant to the secretary, I believe this idea can be developed until a real service can be given our citizens.

During the next few months our members will be called upon to give their services for the good of the profession. With the demands for licensing boards to lower the requirements of practice; with opportunity to strengthen the present law, I feel that our members should stand together, not as members of political parties, but as protectors of public health, and when called upon, lend their best work in selection of lawmakers who will aid medical progress.

THE TREATMENT OF CARCINOMA OF THE UTERINE CERVIX*

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In a consideration of the treatment of carcinoma of the cervix, one enters at once into a realm of uncertainty and conflicting opinions. Where such doubt exists as to the proper course to take, it is well for one to collect a mass of testimony, and by analysis attempt to determine where the preponderance of evidence lies.

Carcinoma of the cervix is a very common neoplasm, and the larger clinics are able to present records of hundreds of cases, but the percentage of unquestioned cures is so small that one doubts the efficacy of treatment at all. This is in marked contrast to the palliative effects of treatment of this condition. The treatments which will be considered briefly in this paper are surgical removal, the so-called heat treatment, and radiation.

The surgical extirpation of carcinoma of the cervix has been extensively and more or less radically employed for the past forty years. Proceeding on the theory that cure could be obtained if complete extirpation were made, the thoroughness of the operation was extended until the operative mortality prohibited any further extension, and yet the percentage of cures from these radical operations remained discouragingly low. The literature in the past year contains few opinions favorable to the continuance of these radical operations. The most notable example of such an opinion is that of Farrar Cobb, who states that of 60 radical abdominal hysterectomies performed for moderately advanced cases of carcinoma of the cervix, there were at the end of five years a percentage of 57.1 cures. This percentage was obtained with a 11.6 percent operative mortality. Could such a percentage of cures be obtained by the majority of surgeons, certainly there would be no reason for accepting any other method of treatment which we have at hand today, but a note of pessimism is found constantly in the reports

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of the greatest surgeons, and it is fair to assume that the results obtained by the average surgeon are much less satisfactory than those obtained by Cobb.

The use of heat in varying degrees by means of the cautery has likewise failed to enlist much support. It doubtless is of value, and it is probably more efficacious in connection with one of the other methods.

During the past five years the attention of the profession has been drawn more and more to the use of radium therapy notwithstanding the fact that the early results obtained were based almost exclusively upon the treatment of hopeless or inoperable cases. Encouraged by the marked regression in nearly all cases, even in those which were very advanced, the use of radiation has been extended to the more favorable types with a corresponding increase in the number of apparent cures. The reports from the larger clinics are so favorable for radiation that the question is now acute as to whether carcinoma of the cervix should be considered a surgical disease. This question applies likewise to the early cases as well as to those moderately advanced.

The low percentage of cures following operative removal must be due to failure of total extirpation of the primary growth, or to the fact that metastasis has occurred before the time of operation. The writer has found that metastasis occurs in some of these cases although clinically there is no reason to suspect such extension has taken place. This metastasis frequently occurs in the spine, the pubic bones, or in the femur, and if radiographs are made of these parts systematically, prognoses will be much more accurate and the course of treatment may be directed more intelligently. It is unfair to the patient to submit her to prolonged irradiation or to an exhausting radical operation for carcinoma of the cervix when at the same time she has carcinoma in some distant part.

It has been the custom of many surgeons to employ radium as an adjunct to operation, reasoning that the effect of the radium might in some way extend beyond the limits of even the most radical surgery. The writer believes there is no such middle ground, and that at least the majority of cases will fall into one class or the other; either surgical extirpation can be performed safely and completely, or the case is one for radiation. Pre-operative radiation with radium in the cervix is likely to be of little value for the reason that the destructive effect upon the cells is profoundly greatest in the tissues closest to the source of radiation. Hence, if the destructive effects be obtained in tissues remote, certainly the proximal cells will be destroyed; or if the proximal cells be not destroyed, certainly the remote structures will not be affected and the knife must in the end invade the affected area. The carcinomatous cervix is an ideal receptacle for the radium tubes or needles, its structures affording sufficient filtration to protect surrounding essential organs. For this reason postoperative radiation is much less effectual than primary radiation. The cautery, when used to destroy a large mass projecting from the cervix into the vagina and to produce a crater-like excavation of the carcinomatous cervix into which can be placed the radium, has been found to be very beneficial.

In mentioning the use of the cautery, let me refer to a statement made by A. J. Ochsner, in Boston last June. He said that while he had been using the actual cautery in cases of carcinoma of the cervix for many years, he had gradually lessened its use during the past four years since he began to have his cases of carcinoma of the uterus treated with radium, and that in the past year he had not operated upon a single case of carcinoma of the cervix. These patients had all been treated with radium. He stated that his reason for doing this was that he found many cases in which there was glandular involvement far beyond the reach of heat. In some cases that seemed incurable the patient remained well for many years, some as long as twenty years. He ascribed this to the fact that the carcinoma in the distant glands were destroyed by the natural ability of human tissues to destroy the cancer microbe. Ochsner also advised against the removal of portions of tissue for diagnostic purposes. He stated that a very high percentage of his cases so treated died of metastatic carcinoma. He thought that portions of carcinomatous tissue might be safely removed for examination by means of the electric cautery.

Ransohoff, who began the use of radium treatment of malignant tissues in 1914, presents the following comment in regard to the question as to whether the radium treatment should be preceded by curettage or by the cautery: "From our observation it would seem that the results were the same one way or the other; therefore, we have definitely given up both curettage and cauterization as preliminary to radium treatment, and now we depend entirely on the radium. If the cases were chosen with the same degree of care that they are chosen for operation, I feel confident that the percentage of cures would be very large. I do not hesitate to state that in my opinion radium treatment should entirely supplant operation, not only in the treatment of inoperable cases, but also in the treatment of operable cases of cancer of the cervix."

Pre-operative use of deep Roentgen radiation through several ports of entry should be encouraged, as this method of radiation attacks the periphery of the growth, rather than the central focus, and its use is not attended by the edematous changes which occur from 5 to

10 days after radiation, and by the extensive connective tissue formation at the site of operation, which occurs later when radium is used in the center of the growth. By modern methods a considerable dose of radiation can be obtained in all glandular structures within the pelvis. In this connection I wish to quote Levin, who has made an extensive study of the action of radium and the Roentgen rays on diseased lymphoid tissue. He states that the outstanding feature of his investigation consists in the fact which he brings forward, that in the diseases of the lymphoid tissue, radium and the Roentgen ray do not act merely as a local agent which reduces the size of a tumor or an organ, but produce a general effect upon the lymphoid system of the whole organism. It is impossible to assert at present with any amount of certainty what the mechanism of this influence is. Also I quote from an article by O. Frankl and I. Amreich, of Vienna, with reference to histological changes incident to radium and x-ray treatment of carcinoma; they summarize as follows: "There are distinct differences between the direct and indirect treatment. Carcinoma cells respond more quickly to the action of the x-ray than to radium and do not show the stage marked by the swelling of the cell body. These facts induce one to advise the use of the x-ray in treating the parimetrium and the glands, while the use of radium is preferable in the treatment of the carcinomatous cervix.

If one must operate, therefore let him precede the operation by the maximum dose of deep x-ray irradiation, and let him follow his operation by radium within the vaginal vault, and a second course of x-ray.

In speaking of the use of the x-ray, I do not refer to the haphazard exposure of the abdomen to an undetermined dosage but to the carefully measured dosage applied to all sides of the pelvis.

My own observation and personal experience has convinced me that the combined use of radium within the cervix and uterus and deep roentgenization from without offers the best hope to the average patient presenting herself to the surgeon for treatment of cancer of the cervix today.

A brief review of the literature of the past year seems to confirm this opinion. The results of the combined method thus far are far from ideal, but it is the best we have to offer.

DISCUSSION

DR. GRACE LINE HOMMAN (Laporte): I was very much interested in what Dr. Porter had to say yesterday—that he was going to ask the secretaries of the different counties to present a program on the cancer problem the first week in November. I am firmly convinced that the treatment of cancer of the cervix is really a problem of prophylaxis and education.

At the Mayo Clinic about 50 percent of cases when seen for the first time are inoperable, and in my series of cases this last year in Laporte, 79 percent have been inoperable, so you see what a slim chance the radiologists have of doing anything, even with radium.

I, for one, am trying to educate every woman who comes into the office for examination. We should take the time—and it takes time—to teach every woman that it is abnormal for her to bleed between periods, or excessively during menstruation; that with such symptoms she should always have an examination to determine if there is anything abnormal. I think every one of us can stop to do that much, and that would help a great deal in the education of the public in the prevention of cancer.

Another thing I think is important—that we consider lacerations of the cervix more seriously as etiologic factors. I think a great many more women should be operated to correct this condition, even though they are going through the child-bearing period. Some may take exception to this statement, but when cancer develops more often about the time of the menopause why wait until the woman has cancer before you correct her pathology?

I have had some interesting cases this last year. Three cases of carcinoma of the fundus, inoperable for various reasons, are doing well with radium treatments. Two of these patients have now gone over a year, the fundus is very small and there is no evidence of metastasis.

I visited Bailey's clinic in New York last spring and saw some wonderful cures. I was given the privilege of examining a number of the cases and was impressed by the excellent condition in which I found a great many of them. Usually Bailey gives but one treatment. He places radium within the cervix and at the same time rays for three hours the broad ligaments and the cervix—using his bomb, which contains a gram of radium. Then the patient is allowed to go home, and as a rule that is all the treatment the case needs. I think with the improved technique and the larger dosage which many men are giving today, we shall have very much better results in the future. There is no question that radium is a wonderful palliative agent. It checks hemorrhage and discharge, and often relieves pain. In most cases the patient gains in weight and is very much improved.

DR. GEORGE KOHLSTADT (Indianapolis): The main thing that appeals to me in this cancer of the cervix is the fact that most of them are inoperable when the doctor sees them and metastasis has occurred.

Radium has been perhaps unjustly criticized because it does not produce a cure; but on the other hand, you do offer these people relief from pain and from other symptoms, with a minimum amount of inconvenience, practically no shock, and that is a great thing. Without

that the patients could only go home and die. You can at least offer palliation, and perhaps cure The time is too short to say whether there have been any cures, but there are some very promising reports of patients who seemingly are in good health. I think the greatest recommendation for radium is the palliation it gives with the least amount of inconvenience.

DR. ALBERT M. COLE (Indianapolis): We have been having hopeful reports from many sources on the radium treatment of uterine cancer. I am especially interested in Dr. Clark's statement as to the advantages of the combined use of radium and the x-ray. I have been following this method and I believe our results are going to be better than by the use of radium alone. It is a matter largely of getting in the pelvis sufficient ray to destroy the cancer cells. Those cells, if any, lying beyond the influence of radium may be reached by the x-ray directed through the abdominal walls.

The Germans have been building x-ray machines giving an enormous output of voltage which generate rays nearly equal to the gamma rays of radium but in far greater quantities. By "cross firing" through the abdominal or chest walls they are able to reach internal cancer and profoundly influence it. They have reported some cures and some astonishing improvements. Lately these reports have been substantiated by American observers but sufficient time has not elapsed to make any positive statements. American made apparatus of similar design will soon be on the market.

Some hope may be entertained that in this new armanentarium we may reach and favorably influence internal cancer, not only of the pelvis but also of the abdomen and chest.

DR. T. C. KENNEDY (Indianapolis): We all know that the surgical treatment of carcinoma of the cervix has been very unsatisfactory.

Many surgeons are turning from surgery to radium even in the earlier cases. In a discussion of this subject before the session of the A. M. A. at Boston, Ochsner made the statement that he had not operated a case of cancer of the cervix this year, but had sent them all for radium treatment. Dr. John G. Clark, at the same meeting, said he felt convinced the time has about arrived when we shall cease to speak of any operable case of cancer of the cervix, but shall submit them all to irradiation. He says he is turning to surgery in such a small number of cases as to carry the statistics in this line almost to the vanishing point.

Laceration of the cervix, in my opinion, is not sufficient to produce cancer. There is something back of it, some lowering of the body resistance, that allows the malignant cell to grow. It is not sufficient to treat the cancer, but we must increase the efficiency of the defensive organs.

A thorough examination should be made. Frequently other organs may be involved. In our service at the Robert Long and Indianapolis City Hospitals, we have a standing order for a cystoscopic examination of the bladder to be made before sending any case of cancer of the cervix to the radium clinic for treatment.

In regard to the cure of cancer, we do not know how many we cure as it is impossible to trace many of them. From my seven years' experience with radium I am convinced that the results are far superior to any operative procedure that has ever been devised. The time has arrived when every case of cancer of the cervix at any stage should be treated with radium.

DR. O. E. SPURGEON (Muncie): I want to report two cases of cancer of the cervix that I think will be of some interest. One case was treated seven years ago by a large amount of radium. The treatment was given at three-month intervals, and she had four treatments. I report this case as of interest since she is absolutely well so far as we can tell, and I report it on account of the length of time since the treatment was begun. At the time of beginning the treatment the uterus was bound down, adherent over to the left side, and there was considerable of a mass, hard and indurated.

I also want to report another case which has also been treated now for four years. This case had applied to four surgeons for treatment and was refused. They all said she was absolutely hopeless and it would be unwise to attempt to operate. She had one application of radium, a large amount was used, and she has entirely recovered. The one dose is all she ever had, and so far as we can tell she is clinically well. This case was very far advanced. The induration was very extensive, the uterus was entirely immovable, and it seemed as though the carcinoma had invaded the bladder wall. Previous to the time she was treated the carcinoma had invaded the rectal wall and there was a rectal fistula. This still persists, but so far as we can tell the case has entirely recovered, leaving only the bad results of the rectal fistula.

DR. H. O. SHAFER (Rochester): It seems to me that if there is any question at all in our minds about whether radium will benefit a patient, we should leave it to the men who are giving radium, because if there is any question it is almost certain there will be a recurrence, and in the last two or three years I have seen enough to make me enthusiastic about radium. I do feel, however, that the cases that get an enormous dose of radium are benefited more than those who have a small dose, and perhaps a second and a third dose.

I have seen two or three cases in which it is almost miraculous what radium has done. I have seen the case which Dr. Spurgeon reported, this inoperable type that was given the

massive dose; and I have also seen one like his case two, inoperable cancer of the breast, and that case has cleaned up and the patient is apparently well. That is one hundred percent more than surgery could have offered them.

I hope cancer week will be taken seriously by every man in every county, and that a lot of these cases will come to us early enough so that radium can be given. I feel it is an uncontrovertible fact that in the treatment of carcinoma in conjunction with surgery radium should be used early and the treatment kept up.

DR. STANLEY A. CLARK (closing): I hardly felt that this section would be particularly interested in the question of technique, so I left that out of the paper. My experience has extended over about two years, although I have been watching radium for a longer time, particularly because my experience with surgery was so unsatisfactory and my colleagues said their experience was of the same character. I think we all agree that as these cases come into our offices it is almost useless to operate. We have a condition which we are pleased to call the pre-cancerous state of the cervix, in which we have been advising operation, and in the past we have operated a number of these, and in none of these which we operated did we find any cancer cells. I feel that in these cases the radium will give these patients as much protection from cancerous tissue as is necessary.

The question of whether this dosage shall be given in one large dose or in several smaller doses repeated is of course still unsettled. When they began the use of radium there was no guide. The dosage varied, and there were many unfortunate sequelæ, as fistula of the bladder, rectal fistula, and of course all these bad results were laid at the door of radium.

The histology of the changes which result after the use of radium or the x-ray in the treatment of cancer is somewhat enlightening. I mentioned the extreme edema that occurs in the tissues after radiation. Surgeons who have operated cases of carcinoma of the cervix know that eight days after the operation extensive edema is produced. It was at one time maintained at the Mayo Clinic that we should operate at that time. They found it undesirable and gave it up and began to operate later. But I feel that that whole theory is wrong. These cases that come to you are either surgical or they are non-surgical. If the lesion is small, if it is in the fundus, or if it is frankly very early, such a case is probably best treated surgically. But these are in the minority. The cases that have gone beyond this stage are not surgical and they never become surgical, for the reasons I have mentioned. If the radium has destroyed the metastasis in the glands, certainly it has destroyed the primary growth, so why cut into it? The curative effect is secured with the production of fibrosis, and in any extensive cancer process, no matter how much it is radiated, you are very apt to find and if you search patiently you will almost always find cancer cells in the fibrous tissue. Any trauma of this tissue, either surgical or accidental, may liberate these cells and the cancer thus made active. They will probably start in the end anyway; that is the reason we do not cure all of these cases.

DISTURBANCES OF CARBOHYDRATE METABOLISM*

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It was the custom for many years to class every individual showing a glycosuria as a case of diabetes mellitus. The condition was supposed to be due to a disturbed function of the pancreas, which in turn was brought about by certain sclerotic changes in the organ. Most of the cases presented the classical symptoms of true diabetes, *i. e.*, thirst, polydipsia, polyphagia and polyuria, with loss of weight and strength. Occasionally, however, cases presented themselves with a glycosuria, but without these other well-known findings. These patients often presented marked evidence of pathological changes in organs other than the pancreas. These last two mentioned facts were possibly the most important points in bringing about a classification of the glycosurias, as nearly as possible, to the etiological factor or the concurring pathological conditions which the patient might present.

The physician sometimes encounters a case which upon a single examination of the urine may show sugar. Following examinations may show an absence of sugar. This glycosuria may be due to any one of the following:

1. A large ingestion of carbohydrates.
2. Excessive mental or physical strain.
3. A disturbance of any of the endocrine glands other than the pancreas, *i. e.*, thyroid, pituitary or adrenal.
4. Brain tumors or injuries.
5. Administration of certain drugs.
6. Renal diabetes.
7. Diabetes Mellitus.

Groups one and two are considered by some men to be physiological glycosuria. Groups three and four are glycosurias due to pathological conditions. Group six, the cause of renal diabetes, is unknown.

The physician occasionally encounters a case which cannot be classified in any of the seven types just mentioned. The patient is one who, during the course of a routine examination, is found to have sugar in his urine. He upon inquiry tells us that he has not ingested a large amount of carbohydrates; nor does he have the

(*) Presented before the Section on Medicine of the Indiana State Medical Association at the Muncie session, September, 1922.

classical symptoms of diabetes. He has presented himself to the physician with symptoms which are not at all akin to diabetes. Evidence of pathological changes in the endocrine glands cannot be demonstrated. The physician may find the patient to have a mild hyperglycemia at the same time the glycosuria is discovered. Subsequent examinations of the blood and urine may show them to be normal. This patient, if given a moderate amount of carbohydrate, may again show a waste of sugar in the urine. This type of individual has been termed by some men as a potential diabetic, and it is in regard to this class of patient that I wish to place the most emphasis in this paper. In order to do so I will give our findings in several different classes of glycosuria cases, for the purpose of comparing them with the potential diabetic.

Group 1 —Physiological Glycosuria. The following chart well illustrates a case of alimentary glycosuria. A medical student was chosen for this test. He was considered physically normal followning an examination by an internist. He was given 100 grams of glucose by mouth. His blood and urine were examined before this administration of sugar, and at one, two and three hours following this meal. The findings were as follows:

	Normal	1 hr.	2 hrs.	3 hrs.
Blood sugar.....	87 mgms.	163	115	76
Urine sugar.....	neg.	.2%	neg.	neg.

In this case the blood sugar increased from 87 milligrams per 100 C.c. to 163 milligrams in one hour after the glucose meal; at the same time a small amount of sugar was found in the urine. At the end of two hours the blood sugar has dropped to 115 milligrams, and the urine is sugar-free. In three hours the blood sugar is normal and glycosuria is absent. This is considered by most men as a normal sugar curve; still others claim a normal individual should not have a glycosuria following the administration of 100 grams of glucose per os. We have had several cases to show sugar, after this procedure, in whom no pathology could be determined.

2. Endocrine glycosuria. S. M., male, age 31 years; height 172 centimeters; weight, 59 kilograms. Patient entered the hospital for tonsillectomy. Chief complaint: frequent sore throat; pains in the joints. Family history: negative for tuberculosis, malignancy and diabetes. Personal history: Had measles and scarlet fever as a child; frequent tonsillitis; influenza a few months ago; no history of pneumonia or typhoid. Denies a history of neisserian or luetic infection. Noticed neck "getting larger" at eleven years of age. Present illness: Since dismissal from service has had repeated sore throat with pain in the joints, confined to bed on several occasions. Physical examination: Tonsils hypertrophied and crypts filled with debris. Remainder of examination of no relative value except for a markedly enlarged thyroid gland envolving both lobes and isthmus. Entire gland is perfectly smooth. Patient has no exophthalmus. Slight tremor is noticed. Pulse 78. Stellwag and Von Graefe both negative. Patient has not lost weight and says he is not nervous. Palpitation not noticed. The basal metabolic rate is plus 16%. This low rate was to be expected with a colloid goiter. Patient was given 1.5 grams of glucose per kilogram of body weight. The following chart shows his disturbance of carbohydrate metabolism.

	Normal	1 hr.	2 hrs.	3 hrs.
Blood sugar.....	80	285	227	72
Urine sugar.....	neg.	2.8%	2.2%	neg.

The blood sugar is still quite high at the end of the two hour period, and the glycosuria is still quite marked. This does not occur in a normal individual, for as already noted the blood sugar should drop almost to normal in one hour and is always within a few points of normal at the end of two hours. This quite well illustrates the usual findings in the cases showing an endocrine unbalance. It gives us an idea of the influence a disturbed function of one gland has upon others of the endocrine system.

3. Renal glycosuria. L. C., female, age 46 years. Admitted to the hospital September 15, 1921. Chief complaint: Nervousness, "stomach and bowel trouble." Family History: Father and mother died of tuberculosis; two sisters dead of tuberculosis; one daughter 19 years of age living and in good health; no history of malignancy or diabetes. Personal History: Usual diseases of childhood with good recovery; no other serious illnesses; always nervous and easily fatigued. Present illness: In March, 1921, had a chill, high fever and pain in left chest; pain "around kidneys," frequency of urination. Had chills two or three hours each day for over a week. These chills were followed by fever. Patient had nausea and vomiting. Great amount of gas in the stomach which was relieved by eating, also relieved by soda. Appetite good, always hungry. No loss of weight. No polydipsia. No polyuria. Patient voided 1500 to 2000 c.c. of urine for twenty-four hours. Physical examination: Nothing of relative value to the case was found in the physical examination. Blood examination: Hb. 79%; R. B. C. 4,768,000; W. B. C. 8,400; Polynuclears 67%; small mononuclears 20%; large mononuclears 13%. Wassermann negative. Blood uric acid 2.1 milligrams per 100 c.c. Blood sugar 74 milligrams per 100 c.c. Urine at this time contained .2% glucose. The following day the urine contained .32% glucose. Phenosulphonephthalein 38% and 12%, total 50%.

The specific gravity of the urine ranged from 1.003 to 1.020. The urine was negative for albumin and casts. 75 grams of glucose were given by mouth and the following curve obtained:

	Normal	1 hr.	2 hrs.	3 hrs.
Blood sugar	90	100	96	78
Urine sugar	.21%	.38%	.24%	.22%

This case shows a glycosuria with a normal blood sugar while fasting. One hour after the glucose administration, the blood sugar content is still normal while the urine sugar is slightly increased. At two and three hours the blood sugar is still lower and the glycosuria is slightly decreased. This type of case shows little difference in the sugar waste regardless of the carbohydrate intake. Glycosuria in the presence of a normal blood sugar is diagnostic of renal diabetes. Renal diabetes is a condition over which there is a great deal of discussion. Some clinicians even doubt its existence and consider it as a type of true diabetes. The underlying pathology of the condition is not well understood. Still every one must admit that the three classical symptoms of true diabetes are most often absent. We were unable to get a ureteral catheterization of this patient to determine as to whether or not the urine excreted from each kidney would show the presence of sugar.

4. True diabetes. Every clinician is quite well acquainted with the blood sugar findings in a case of true diabetes. Hyperglycemia is to be expected as long as glycosuria is present. In fact the blood sugar content is almost always above 160 milligrams per 100 c.c of blood while the patient is showing sugar in the urine. I do not believe a great deal of value is obtained from blood sugar determinations while the patient is wasting sugar in the urine. When once you have the patient's urine free from sugar such an estimation gives you an idea of the individual's tolerance, or the kidney threshold point. I know of several cases, while under treatment, the urine was rendered sugar-free, and the physician thought it well to increase the carbohydrate intake. In one case the blood sugar was still quite high, 280 milligrams per 100 c.c. This would surely contraindicate any increase of sugar in the diet. It means either that this patient has a decreased tolerance for sugars, or a kidney condition which has raised the threshold point.

Some clinicians make a glucose tolerance test as soon as their diabetics become sugar-free, with the idea of determining the individual's tolerance. I do not believe this to be a good policy. It simply overburdens an already overworked pancreas and little is to be gained in the end by such a procedure.

We find no constant relation between the blood sugar content and the amount of glucose in the urine. For example, a patient may have 6% of sugar in the urine, and only 250 milligrams in the blood; or 2% of sugar in the urine, 450 milligrams in the blood. The former mentioned type is the easier in our experience to free from sugar, but is more apt to have an early recurrence than the latter.

Blood sugar determinations are of great importance when the urine is sugar-free, for at this time they act as a guide to dietary regulation; and also give us some idea as to the effect of treatment. We cannot rely on blood sugar determinations alone because of the fact that each individual is a law unto himself as to his glucose tolerance and kidney threshold point.

Wilder classifies his true diabetics under five groups, according to the clinical and pathological conditions encountered. He also gives the mortality rates on each class. He made a study of 298 cases presenting themselves at the Mayo clinic from January, 1920 to September, 1921. His classification is as follows:

a. Acute diabetes, characterized by abrupt onset and gradually falling carbohydrate tolerance, loss of strength and weight. Nineteen percent of the cases were of this class—most of them young people, average age twenty years. Nearly 25 percent of the cases followed attacks of influenza. Fourteen of these cases died in the first year.

b. Vascular diabetes. These cases associated with hypertension or arterio-sclerosis or both, with or without renal complications; 30 percent of the cases were of this type. The onset is insidious. The course is chronic. Ten died in the first year.

c. Diabetes of obesity. Fifteen per cent of the cases in this class. No vascular or renal disease evident, neither could evidence of pancreatitis be determined. The disease in this class of patients tends to be mild. Acidosis was found to occur quite frequently in this group. Only two deaths reported in two years.

d. Interstitial pancreatitis. Only 53 or about 15% showed evidence of pancreatic involvement, either as determined at autopsy or suggested by cholecystitis or other inflammatory processes near the pancreas. Many of the cases operated on at the clinic for different conditions had small pieces of the pancreas removed for microscopic examinations. The course of the disease is chronic and easily controlled by dietetic measures, according to Wilder. Only five deaths were reported in the first year.

e. Miscellaneous persistent glycosurias. Under this heading he has 54 cases. Five had tumors of the pancreas, fifteen had glycosuria following hyperthyroidism, five had tumors of the brain, four were renal diabetics, one had

syphilis antedating the onset of diabetes. Twenty-four of the causes he did not classify.

Wilder states that not enough time has elapsed to give definite prognoses on each class of case presented. He thinks that at least five years should elapse before any definite conclusions can be drawn. Every clinician has possibly noted these various types of diabetics, and if he would so classify and later follow them, we could possibly make some deductions which would be of value in a prognostic way.

5. Potential diabetics. Under this heading I place the individuals, who are without the classical symptoms of diabetes. Allow me again to refer to the cardinal points in this type of case. Sugar is accidentally discovered in the urine during the course of a routine examination. They present themselves to the physician for some ailment which is not at all akin to diabetes. The physician upon finding this small amount of sugar in the urine makes repeated examinations at later dates and is unable to detect sugar. He often gives 50 to 100 grams of glucose, and sugar again appears in the urine. Blood sugar examinations made upon these patients often show a mild hyperglycemia, while at the same time glycosuria is absent. Blood examinations for non-protein nitrogen, urea, uric acid and creatinine made at the same time are found to be normal. This type of case if closely supervised as to diet may not at any later date show sugar in the urine. The same cases without dietary restrictions are quite apt to become true diabetics. The following cases will represent a few of this class of patients:

D. F., male; age 32 years; occupation, grocer. Chief complaint, nervousness, easily fatigued, rheumatism. Family history: Father and mother living and well; one sister and two brothers living and well. No history of tuberculosis or malignancy. No history of diabetes in family. Personal history, measles and mumps as a child, typhoid at 13 years; influenza 1917, followed by pleurisy; some joint pains since dismissal from the army. Present illness, entered the hospital September 6, 1920. Complains of tiring easily on exertion. Notices palpitation during slight exercise. Has chronic cough which he thinks is due to excessive smoking. Has had frequent pains in ankles and knee joints for past nine months. No fever at any time. Physical examination: Patient appears undernourished. Skin appears dry. Eye reflexes normal. No exophthalmus. Nasal passages appear normal. Tonsils enlarged and crypts filled with debris. Thyroid appears slightly enlarged in right lobe. Chest: Increased breast sounds over left apex, lungs otherwise normal. Heart normal in size, no murmur. Abdomen: No tenderness over gall-bladder, pancreas or McBurneys point. Extremities: Reflexes normal. Slight tenderness of knee joints when pressure is made. Pulse 76; Temperature 98.4; respiration 20. Urine examination, 9-7-1920—Sp.Gr. 1.022, Albumin-negative, Sugar-Neg. 9-8-1920—Sp.Gr. 1.026, Albumin-negative, Sugar-.6%. Blood count—Hb. 81%—R.B.C. 4,320,000—W. B. C. 8,600 Polys—78%; Small lymphocytes 16%, large lymphocytes 6%. Blood Wassermann—Two plus positive. Glucose tolerance test—9-14-1920.

Glucose tolerance—9-14-20:

	Normal	1 hour	2 hours	6½ hours
Blood sugar	98	110	155	not made
Urine sugar	Neg.	Neg.	.24%	.18%

9/18/20—Blood Sugar (fasting)—77 milligrams per 100 c.c.

9/20/20—Basal Metabolic Rate—Plus 6%.

This case shows a rise in the blood sugar content after the administration of glucose. It also shows a continued glycosuria as late as six and one-half hours after the glucose meal. This bespeaks a disturbance of carbohydrate metabolism. Some might class this patient as a renal diabetic because he shows sugar in the urine with only a slightly increased blood sugar. The patient only had sugar in the urine at one time before the tolerance tests were made. He was at this time on a regular diet and had not ingested any unusual amount of carbohydrate. This is the fact that directed our attention to him. He was dismissed from the hospital a few days after these examinations were made with instructions as to his carbohydrate feeding. The patient again entered the hospital Oct. 28, 1921. His complaint at this time was loss of weight, polydipsia, polyuria and marked weakness. His weight had fallen from 154 pounds in September, 1920, to 130 pounds at this date. Morning specimens of urine and those collected two hours after dinner were negative for sugar on October 29th and November 2nd. Patient was at this time on the usual soft diet as served in the hospital. On November 3, 1921, patient had .25% of sugar in the twenty-four hour specimen. Sugar could not be found on November 4th or 5th.

Glucose tolerance—October 31, 1921:

	Normal	1 hour	2 hours	3 hours	4 hours
Blood sugar	93	166	253	181	not made
Urine sugar	Neg.	.62%	1%	1.2%	1.5%

This shows a markedly decreased glucose tolerance to that obtained a year previously. This patient when first seen was possibly in a pre-diabetic condition. We do not believe his thyroid condition was active enough to cause his carbohydrate unbalance when he first came under our observation. His clinical symptoms and basal metabolic rate cause us to make this conclusion. When seen this last time his thyroid was more enlarged and his metabolic rate increased to plus 37%. It may be that the carbohydrate intolerance is primary in this case to the thyroid condition. The patient was last observed a few months ago. His thyroid condition appeared improved. He makes several tests of his urine each day and it remains sugar-free as long as he carefully observes his diet.

The three following cases we were not permitted to study with so much detail as they were out patients to the hospital and only came in for laboratory examinations:

Mr. C. D. Age 32 years; machinist; weight 168 pounds. Seen October 21, 1921. Six months previous to this date the patient had been to the Mayo clinic where he was diagnosed as a case of chronic appendicitis. He refused operation. While at the clinic, and on regular diet, sugar was found in his urine. The patient's father was a physician and instructed the son to make his own urine examinations for the detection of sugar. These were repeatedly negative except on one occasion. The patient was eating whatever food he liked, omitting sugars in excess. On the date seen by us his urine was sugar-free in both morning and 2:00 p. m. specimens. His twenty-four hour specimen was also negative for sugar. His blood sugar was 160 milligrams per 100 c.c. He was cautioned against eating so much cabohydrate, and he promised to limit himself more closely. January 30, 1922, his three urine specimens (twenty-four hour, morning and afternoon specimens) were sugar-free, and his blood sugar was 152 milligrams per 100 c.c. On March 31, 1922, his urine was still sugar-free and his blood sugar down to 100 milligrams. His diabetes is arrested. He was unquestionably a potential diabetic.

Mr. E. C. H. Age 52 years; traveling man; weight 154 pounds. While presenting himself to a physician for a physical examination for life insurance, sugar was found in his urine. On March 2, 1922, his blood sugar taken while fasting was 156 milligrams per 100 c.c. On March 4, 1922, his urine was sugar-free, examined after a heavy meal. The physician cautioned him against the too free ingestion of sugars. The patient had lost no weight, nor did he present the other symptoms of true diabetes. Several blood and urine examinations were made at later dates as follows:

	Blood Sugar	Urine Sugar (24 hr. specimen)
4-1-22	88 mgms.	Negative
5-6-22	84 mgms.	Negative
6-3-22	102 mgms.	Negative

This is another potential diabetic. By limiting his carbohydrate intake his pancreas, which has been overworked, has been allowed to recover its balance, and he will possibly be free from glycosuria, even when placed upon the amount of carbohydrate used by a normal individual.

W. D. A. Male; age 56 years; patient seen on May 26, 1922. This patient was sent to the laboratory for a complete blood chemistry examination and protein sensitization test. He had frequent urticaria and a peculiar skin eruption. His blood findings were as follows. Blood Urea-Nitrogen, 15.4 Milligrams per 100 c.c.; Blood Uric Acid, 2.4 Milligrams per 100 c.c.; Blood Creatinine, 1.6 Milligrams per 100 c.c.; Blood Sugar, 153.0 Milligrams per 100 c.c.; Blood Carbon-dioxide, 69 Volume percent. In this case we notice a rather marked retention of sugar with the products of nitrogen metabolism within normal. This point struck us rather forcibly as the patient had not taken any food for sixteen hours. A morning and twenty-four-hour specimen of urine was negative for sugar. Blood Wassermann was negative. The protein sensitization test showed the patient to react to every food containing a large amount of sugar. The patient was advised to limit himself on carbohydrates and those foods to which he reacted by the protein skin test. A few days later the patient visited a very good internist in Chicago. He was told that he had a "diabetic dermatitis." His carbohydrates were reduced in his diet and his urticaria and skin eruption have disappeared. This patient may be an arrested diabetic. I feel that he should also be classed as a potential diabetic.

CONCLUSIONS

1. Any individual showing sugar in the urine needs medical supervision. If it is a physiological glycosuria [illegible] itself. If from an endocrine condition it is not so apt to be serious in itself, and will disappear if the etiological factor can be relieved.

2. Individuals showing a persistent glycosuria may be either "renal diabetics" or true diabetics. The seriousness of "renal diabetes" is questionable, as these cases have not been studied over a long enough period of time. Diet does not influence the glycosuria in these cases.

3. Blood sugar determinations are of value in establishing the glucose tolerance of a patient, and in studying the influence of diet and medication when once you have the patient's urine free from sugar.

4. Quantitative sugar estimations of the urine are of value when made upon twenty-four hour specimens of urine.

5. True diabetics should be classified according to the etiological factor and the concurring pathological conditions. This would be of value in outlining treatment and also in a prognostic way.

6. Any individual showing an occasional positive test of sugar in the urine should have a blood sugar examination. In this way lowered glucose tolerance may be detected, and the physician has the opportunity to reduce the patient's carbohydrate ingestion. This may be the one

big factor in allowing an over-burdened pancreas to establish its balance, and in this way prevent a future case of diabetes mellitus.

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DISCUSSION

DR. B. M. EDLAVITCH (Fort Wayne): We are just beginning to obtain laboratory information of real value in this particular field, and we are practically just beginning to get clearer ideas and a better understanding of some of the clinical problems bearing on carbohydrate metabolism. Therefore, any contribution that brings out original observations along this line is well worth while. The principal point Dr. Warvel brings out—the pre-diabetic stage—is not altogether new, but this is a new field, and such a paper as this serves to bring the subject before the profession at large and helps to bring home some of the information that every medical man should have.

While most of us will agree with the doctor in the main, there are some points that justify differences of opinion. In the case of the first student who was given 100 grams of glucose, Dr. Warvel at the end of one hour found 163 mgms. of blood sugar, with 2 percent of sugar in the urine. This he considers a normal sugar curve, but he admits that others claim there should not be a glycosuria after 100 grams of glucose by mouth. I confess that I hold the latter view. I believe that a person who has a normal carbohydrate tolerance and a normal carbohydrate metabolism will not show hyperglycemia under these conditions. But there is no unanimity of opinion on this question today, and so long as we do not know the fundamental processes that underlie this question there will be ample justification for such differences of opinion.

In the second case the doctor presents there are some diagnostic features that point to a hyperthyroid state, and, on the other hand, some clinical findings that point to colloid goitre. In the presence of the practically normal metabolic rate (plus 16), the diagnosis of colloid goitre was justifiable and undoubtedly correct, as against hyperthyroidism.

The essayist is right when he says that there is no constant relationship between the blood sugar content and the amount of sugar in the urine. Because of this fact it becomes of considerable importance to find out just what has happened in the blood with regard to sugar—just as important as with regard to sugar in the urine. In order to find out what progress a hyperglycemia patient is making it is important to follow the blood sugar content at frequent intervals in order not to have to rely upon the urine sugar findings alone. The most accurate way of following these cases would be by daily determination of the blood sugar.

The doctor's final conclusion is that any individual showing occasionally a positive test for sugar in the urine should have a blood sugar examination. A blood sugar examination alone is not enough. Such a patient should have repeated examinations for blood sugar, as well as for urine sugar, under different conditions, *e. g.*, after a full meal, after fasting, after a glucose meal, because only in that way can the physician finally come to a definite conclusion as to whether he is dealing with a case of prediabetes, or the so-called "potential diabetes".

DR. C. R. STRICKLAND (Indianapolis): We are distinctly indebted to Dr. Warvel for the presentation of this paper, because of the fact that quite recently diabetes has begun to come into its own for consideration and contemplation among physicians. Over 5,000 deaths occur from diabetes each year in the United States. That gives each of us a case now and then, and if we are careful in our examinations we will find many more cases as time goes on. Bringing in the carbohydrate metabolism makes the discussion of the paper extremely difficult because of the variety of things that enter into consideration.

Some years ago Allen said that there was no diabetes without pancreatic insufficiency. I think he has now partially taken that back. Diabetes is a complex, a condition rather than a disease, and the diabetic is an individual rather than the individual being a diabetic. We know that disturbances of the liver, the thyroid, the adrenals, and the autonomic nervous system will change the carbohydrate metabolism quite considerably. Postmortem reports covering 5,000 cases from Bellevue Hospital showed not many cases of pancreatic disturbance, although I believe it is not possible to have pancreatic disturbance carried so far that we would not sooner or later have carbohydrate disturbance. That means that we will have to contemplate our cases more intensively and not prescribe merely a low carbohydrate diet and let it go at that.

I agree with Dr. Edlavitch that in Dr. Warvel's case the observation might not have been accurate. I do not believe one reading is sufficient to predicate a decision as to what would be normal, any more than one reading of the metabolic rate would be enough.

I should like to emphasize one point brought out by Dr. Warvel, and that is the importance of studying the blood chemistry. I should not consider the determinations in a case of glucose metabolism complete until I had made a full blood chemistry study. We are not sure of the etiology of diabetes, although perhaps we are getting closer to it as time goes on. Possibly such things as depress pancreatic function or alter the glucose metabolism would affect the kidney function, in which case a study of

the blood chemistry would show a disturbance in kidney function.

I would not place much confidence in the blood Wassermann in diabetes. It is notoriously positive in hyperglycemia, and yet is not necessarily a syphilitic reaction. I am not sure that this is true, but it is an observation often made by myself and others.

Diabetes is on the increase. Whether Allen was right in saying that this is due to the growing tendency to replace alcohol with sugar and candy, I do not know; but the taking of sugars and candies in immoderate quantities for a time might depress the pancreatic function by exhaustion. We therefore will probably find more cases of diabetes coming on than we have had before.

That brings us to a consideration of what we call "potential" diabetes. Naturally we are not acquainted with the metabolic balance or chemical adjustment of every individual, and, since we know that present-day stress of living, particularly during postwar readjustment, is producing depressing influences on the metabolic balance of many individuals, we should most earnestly investigate every patient who shows sugar in the urine. He may have only a so-called physiological glycosuria, or he may be in one of the borderline states of what is rather properly termed "potential" diabetes. I do not believe that any man with sugar in the urine should feel free from the advice of his physician, or from diabetes, until it has been established over a long period of time that he is free of sugar in the urine. He should come in every few months for examination, in view of the fact that he may be a potential diabetic.

DR. J. T. BOWLES (Muncie): In a practice of sixty-three years I have met and treated many cases of diabetes mellitus. The treatment that I have always adopted has been this: an exclusive diet of green vegetables, milk in all its forms, cheese in all its forms, excluding meat absolutely, and also excluding the more powerful carbohydrates, potatoes and sugar. I have two cases under observation now in Muncie, extremely bad cases that would be pronounced hopeless by the majority of physicians. I was called in to one case when the body was covered with furuncles and the polyuria was extreme. I put this patient on green vegetables, cheese, milk and eggs. I also give her citrate of soda every three hours, with five drops of specific jaborandi every three hours. I have had this patient under observation for six weeks, and last Sunday morning she was able to get up and get breakfast.

In all cases where I find sugar in the urine I put them on this treatment, and nearly all of them have recovered and have died of some other disease. I do not remember treating a case that has died from diabetes.

DR. ALLEN HAMILTON (Fort Wayne): Both the essayist and Dr. Edlavitch spoke of the difference of opinion on blood sugar findings. There is a very marked difference in methods employed. If you follow Folin, then the results are very different from those obtained by the Benedict methods on the plasma. If the readings done by the essayist were done on the plasma, they were very low. If Folin's method was used, it was a practically normal case. There are very different results in the different methods, and the percentages are much higher in the Benedict. Folin has now changed his method so as to get higher results.

Dr. Warvel spoke of the special classification of fat cases. That only means that they may be mild cases. If the pancreas is damaged the breakdown is where the strain comes.

I think the speaker said Allen had retracted from his former position. If he has it is in such a fine degree that it is impossible to see the difference. One point Allen makes is that the seriousness in children may show a difference in function from that seen in adults. This is not seen in puppies experimentally, for they do not show this difference from adult dogs; but children may show a difference in function of the pancreas.

After you have diabetes established it makes a vast difference in the form of food which the patient is given as to whether the blood sugar will come down within a reasonable time or not. If they have overstepped their diet and have a hyperglycemia from taking carbohydrates, it will come down very easily, whereas it is very hard to get it down after fat. The present use of high fats is a return to the old Vienna teaching in this disease, but if you feed high fat you are going to get a hyperglycemia that is very difficult to get down. For a short time you can feed fat in high calories, but if it goes on for any length of time it will be difficult to bring down. After all, the feeding of diabetics is a matter of cutting down the total calories.

DR. CHARLES S. SELLERS (Hartford City): From the practical points brought out by the essayist it has been well worth our while to attempt to stop the indiscriminate diagnosing of diabetes by examination of the urine alone. It is a very serious matter to have an insurance examiner turn down an applicant for life insurance because sugar has been found in the urine. It not only has great influence on his obtaining further insurance, but is a considerable shock to the individual.

Diabetes mellitus, to be diagnosed correctly, must be studied over a long period of time. It must be remembered that diabetes is a general metabolic disturbance resulting in an individual intolerance to the carbohydrate group of foods, manifesting itself in a persistent hyperglycemia. It must be remembered also that in a normal

individual you do at times have a hyperglycemia which does not persist, but is influenced greatly by exercise and food.

I wish to place in these records a case of diabetes complicated by a lymphatic leukemia; or a lymphatic leukemia complicated by a diabetes mellitus. The diabetes was discovered about 18 months before the leukemia. Reginald Fitz of Boston reports one similar case, but was unable at that time to find other reported cases.

DR. C. F. VOYLES (Indianapolis): Before the advent of the Wassermann test a man giving no definite history of syphilis gave a history of a mild cerebral hemorrhage while yet a young man. His diabetes mellitus had resisted treatment. He made a nice recovery after I put him on mercury and potassium iodide.

About six years ago I had a case in which there was no history of lues, and a Wassermann test was a clear negative. This patient also had received other methods of treatment with no benefit, but he made a satisfactory recovery on anti-syphilitic treatment.

Personally, if I carry the responsibility of treating diabetes mellitus I shall bear in mind the possibility of lues as the etiologic factor.

DR. JOHN H. WARVEL (closing): I was not so much interested in the dietary treatment or the methods of making the blood sugar tests. The point I wished to emphasize was the early discovery of pre-diabetic conditions, as we feel that many a future case of true diabetes may be arrested.

I still believe that urine sugar estimations are equally as important as blood sugar determinations, especially if made by the method suggested by Folin and Berglund. By this sensitive test we find that the sugar overflow by the kidney is parallel to the blood sugar content. This avoids drawing a blood sample each day, and we find many patients resent this procedure.

CONSTRUCTIVE THINKING IN OUR MEDICAL ORGANIZATIONS.*

A. W. CHILDS, M.D.

MADISON, INDIANA

Ladies and Gentlemen, in calling to order this annual meeting of the Fourth District Medical Society, I wish first of all to welcome you most heartily and greet you in a true fraternal spirit. We may well congratulate ourselves on our commodious and beautiful meeting place, and on evidence already manifest of true and genuine hospitality. We are fortunate also in the work of our program committee, for as I glance over the program I note that it has not been necessary this year to go outside of the society for talent, as every feature of the program is the product of our own efforts. I do not wish to be understood as opposed to imported instruction, for often we get valuable service from the man from without our ranks, but I do wish to emphasize the psychological fact that expression is essential to strong impressions, and when we deprive our members of the opportunity of expression in our medical societies we are depriving them of an opportunity for growth, and we are weakening our own organization. The strongest local society in our district is the society whose members are ready at any time to prepare a paper for the local or district meeting, and the weakest society is the one suffering from a sort of "parasiteism" in which the most commonly expressed symptom is, "Let the other fellow do it."

The life of a society, the same as the life of an individual, is indicated by its aggressiveness, "something doing," "pushing forward," "making your influence felt," "co-operation," and "constructive thinking," and are applicable in the description of a live society, while on the other hand "lethargy," "inanition," "exhaustion," "incoherence" and "discord," are symptons of decline.

As individuals we cling to life as the dearest possession in the world. One of the richest men in the United States says, "that he would give ten million dollars to prolong his life ten years." How precious life is to all of us, and yet we do not appreciate it till it begins to recede, then we come to realize that we are getting out of life in proportion to what we put into it, for the world pays us in proportion to our efforts and in the coin we ask. The wealthy man gets his gold, but the man who asks for better things receives that which is more precious than gold.

The lower animals generally live from four to six times the length of their maturing period. Why should man decline in about twice the time it takes him to mature? No man or animal is old until he feels himself old. I once knew a horse which was younger at thirty than some other horses I have known at twelve. Man is not old until his interest in life is gone, and his spirit becomes aged and his heart unresponsive. Touching life at many points with a constructive and not destructive idea will keep him young in spirit. Any man who is out of touch with youth and the spirit of the times in which he lives, who is always living in the past and longing for the "good old days," and whose mind is constantly dwelling on his infirmities, is old, no matter what his years.

Now as to the application to our Medical Society, our organization is the means through which we should have the freest expression. Through it we should be able to say to the world the things we want said. Through it we should be able to control legislative bodies, and have laws enacted which will not only protect

(*) Presidential address, Fourth Councilor District Medical Society, presented at Milan, Indiana, May 16, '22, and referred to THE JOURNAL for publication.

us but the public as well. It should be the greatest possible factor in the promulgation of health ideas and high moral standards. In other words, we as a medical organization, district or local, should have a wonderful influence in moulding the public conscience along the lines of right living and good health. But do we say to the world the things we want said? How seldom do you hear of a medical organization recommending any constructive work for the good of the community? How seldom do you hear of even one medical man appearing before the school children of his community?

Do we control legislative bodies? The laws in our own state are such that men without education and without legal and professional standing come into our communities and under the stimulous of big advertising and quackery insult the medical profession and rob the people of their right to be treated by men who have more than a financial interest in them. And yet legislators say that the medical organization is strong enough to have anything it wants in the way of legislation if it but knew how to wield its power. Do we direct the public conscience along the lines of right living and public health? Here it requires only the effort. People old and young are glad to listen to the medical man whenever he is willing to talk. A campaign of health talks in the public schools would be well received by children, teachers and parents, and recommendations from our local societies for the betterment of health conditions would be constructive work and would rejuvenate our organizations.

The most appalling situation in our local societies is the lethargy on part of its members; a symptom of old age and decay. Every physician here knows how difficult it is to get a full attendance when a paper is to be read by a local member, or when some educational work is to be put on by the state organization—constructive work—not interested—sign of decay. If there should be a funeral of one of our members we would attend. We are still alive enough to show our respect to the dead. Should we announce a subject such as: "A Death Blow to the Chiropractor," we would have a turn out, for we are interested in this particular destructive process. If we announce the subject of "Fees" a good attendance is sure to follow, for we are still alive to the calls of the butcher, the baker, and the candle stick maker. But a constructive program, even though it promises to better our condition, receives little attention in our local societies.

A recent letter from one of our state medical officials, in reference to the matter of strengthening our Indiana Medical Practice Act, says: "This has been attempted at each recurring session of the legislature for the past sixteen years, but on account of the well organized opposition put up by chiropractors and the *lack of an organized effort on the part of the profession,* we have been unable to get by with anything proposed to amend the law by the law-abiding physicians of the state. It is a sad commentary upon the intelligence of the legislative branch of our government that it lends listening ears to the violators of the medical law. This can only be accounted for because of the lack of uniform action of the law-abiding physicians of the state." Here is the admission on the part of a medical man at the head of the procession that the illegal man is organized for constructive work, and the legal medical man is unorganized, which means destruction. Our organization is large and portly and it is time honored. Possibly we are suffering from an accumulation of adipose tissue, common to senility.

A state legislator in commenting on the statements of this letter says: "That it is not a sad comment on the intelligence of the legislative branch, for the legislator must consider all sides and it is his business to try to make adjustments between the opposing parties which will be satisfactory to all." He laments the fact that the medical society is so poorly organized and seemingly so little interested in what they want, while the opposing forces are martialed and trained like an army and have a definite point of attack. He says that when there is a bill before the legislative body that concerns the chiropractor and the M. D. a flood of letters from chiropractors all over the state come to their respective legislators urging them to favor their side of the question. While from the M. D.'s there come a very few.

Another situation which must be recognized is the fact that while the medical men have been sleeping the chiropractor has "adjusted" himself and his "adjustments" into the hearts of the people, and from this anchorage he will be hard to dislodge. Whether we like it or not we must stand by and watch our patients go to him for treatments, and sometimes we have to hear how they have been benefited. We say it is a sad comment on the intelligence of our patients, but often the best educated people are the ones who go, and they don't ask our advice, and some come away singing the praises of the chiropractor. A representative woman, of good degree of intelligence, said to me, "The chiropractor is delivering the goods." Another said, "I doctored so long with the M. D.'s, so I just decided to try the chiropractor, and he has helped me." Sometimes they say "he has done me no good," but which ever that may be, the fact is that we, because of our lethargy for the past sixteen years, to the strength of the Medical Practice Act, have allowed the chiropractor to come in and try his experiment and as a result he has

become established. Now, what is the situation? The chiropractor has a foot-hold. The medical man is fighting him personally, and thus helping to advertise him, but is indifferent to the legal control of his business. The chiropractor advertises, the medical man does not, and often fails in the application of the principals of good salesmanship. In the face of all of this, can we, simply because of our long standing, and time honored respectability, hope to hold the laurels? Can we dare to hope that the legislative bodies of to-day will frame up and hand us just the legal protection we want when we are not united on what we do want, and make no united effort to get anywhere?

But the chiropractor is not the only culprit. There are the traveling specialists who come into the community every few weeks, such as the Spanish Specialists, whose specialty seems to be all the diseases of men, women and children; also the street corner vendors, with their healing balms and concoctions, and many patent medicines, etc. All of these inroads into the field of medicine need consideration, but just what should be done in individual cases is not within the realm of this paper. I am simply trying to make a diagnosis and expect to leave the treatment to more experienced hands. However, I wish to refer to a few suggestions from a letter from W. S. Campbell, M. D., president of the Standard Laboratories, who was asked what to do about the traveling specialists referred to above. He mentions the Sullivan county close communion organization as one solution, also he says sometimes it is better to give the calf plenty of rope and allow it to hang itself. In his letter he emphasizes the fact that the object of any fight should be the protection of the people rather than damage done to the profession.

There seems to be no legal way to handle these and many other difficulties constantly coming before us, and since undoubtedly the medium of the law is the correct solution, better legislation is the thing for which we should strive. A get-together program should be inaugurated and promulgated throughout our district, and we should not cease in our efforts till we have every physician enlisted in his local society, and every society in the state working for the common good. Let us get together for better legislation and help to enact better laws for the protection of the people. Let us get together for better health, and a higher standard of morality in our community. Let us get together men, socially and spiritually, and learn to love each other more, eliminate our petty professional jealousies, and break down the factions that divide and weaken us. Let us get together on constructive work, realizing with Browning, "that progress is man's distinctive mark alone, not God's and not the beast's. God is, they are; man partially is, and wholly hopes to be."

CONGENITAL DISLOCATION OF THE HIP

Henry Bascom Thomas, Chicago (*Journal A. M. A.*, Feb. 4, 1922), reviews his results in the treatment of dislocated hips. In all, there were forty-four cases and fifty-six hips. Twenty of these cases, or twenty-six hips—the condition being bilateral in six cases—were those of patients 6 years of age or older. In this series, eighteen operations were done. Reduction was effected in five cases, in one of which the dislocation was bilateral. One hip was redislocated because of the development of trophic changes. Eleven hips (seven cases) were not treated because the prognosis was too unfavorable. One hip remained out, as attempts at manual reduction failed and the open method was not tried because the muscles were too tense. One hip is marginal. In another case the result is questionable. The results in seven cases are not yet known. In none of these cases was the machine or reducing table used. There were twenty-four cases of patients under 6 years of age. In six of these the dislocation was bilateral. Therefore, these cases included thirty hips. Forty operations were performed Fifteen hips were reduced with a fair to good anatomic result and good function. The parents were pleased. Three hips remained unreduced and the patients did not return after release from the cast. In two cases the dislocation recurred. One of these patients has a fairly good function. In two cases the result is questionable. The results in six cases are not yet known because only the index card was found. In one case of bilateral dislocation the anatomic results are perfect and function is good but the patient limps slightly when fatigued. The five cases in which the hip is still out, the two cases in which it is marginal, and the two cases in which the results are questionable should not be regarded as failures, perhaps, because, as the patients are still under 6 years of age, the prospect of a successful result in another attempt at reduction is at least fair.

It is urged that all those who have had experience in the treatment of congenital dislocation of the hip make a detailed report, thus aiding in establishing standards of management which cannot fail to improve our results.

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Devoted to the Interests of the Medical Profession of Indiana
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Editor and Manager

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EDITORIALS

SURGERY IN CARDIORENAL DISEASE

That longstanding focal infections play an important role in the production of cardiovascular renal disease is generally accepted throughout the medical profession. It follows that removal of such foci as a preventive measure is always indicated. Similarly the advisability of removing such primary foci as a curative measure in cases already established can scarcely be questioned—at least as a general working rule. On the other hand, cardiovascular renal disease once established is a progressive process independent of the primary focus of infection. Just as the chronic multiple arthritis which arises from long standing tonsillar infection soon reaches a point where the several infected joints may themselves act as "feeding foci" and the arthritis spread therefrom in spite of tonsillectomy, so it is with the degenerative process known as cardiorenal disease. Tonsillectomy in widespread chronic arthritis of tonsillar origin is still indicated, it is true, and usually proves of material benefit even in advanced cases. There is a point, however, at which such cases should not be operated merely because the general conflagration has dwarfed the importance of the initial blaze into insignificance. Cardiorenal disease analogously reaches a point in its development at which renal degeneration is beyond material benefit, regardless of operative procedures directed against the focus where the original infectious process arose. Such operative procedures are not productive of material benefit under such conditions, and because of the risk attendant upon all surgery in such cases are distinctly contra-indicated. The surgical risk itself is not the strongest contra-indication because it may fairly be argued that such condition will inevitably progress to a fatal issue unless "something is done". The most potent argument against surgery in advanced cardiorenal disease, regardless of the surgical objective, is that the inevitability of its fatal issue will not be altered one whit thereby. Repression is infinitely more difficult than "doing something", but in such cases is infinitely more advisable and somewhat less hazardous.

CANCER WEEK

The American Society for the Control of Cancer, stimulated by their experience last year, are going to put on another "Cancer Week" throughout the United States and Canada, November 12th to 18th, inclusive. All agencies are to be utilized in the endeavor to get their message to the people. Short talks will be given before lodges, clubs, churches, industrial bodies and at the theaters. At the latter places also moving pictures and legends instructive in character along this line will be shown.

The cancer mortality is appalling and is increasing. There are more deaths from cancer every year than occurred because of our two years' participation in the great war. The annual toll of destruction from cancer far exceeds that from many common diseases like typhoid, scarlet fever, diphtheria, etc. It causes one out of every ten deaths after the age of forty in this country. Among women of forty and over, one out of every eight deaths is due to cancer. It is estimated that we can save, through ten years' work in cancer education, thirty thousand lives annually in this country.

We hope to carry this cancer message to every community of five hundred and over in this state, but to do this we need the help of every doctor in Hoosierdom. Information, literature and speakers may be had by addressing either Miles F. Porter, Carroll Building, Fort Wayne, or T. C. Kennedy, Hume-Mansur Building, Indianapolis. The Society in this state also owns the films of the Reward of Courage, which is an interesting and beautiful picture and one which teaches a very important cancer lesson. The Society will be glad to loan these films to communities desiring them, without charge save for transportation.

PUBLIC HEALTH WORK AIDED BY FISH

As an indication of the valuable work being done by the Rockefeller Foundation it may be noted that as a result of the activities of the Foundation the yellow fever outbreak on the Pacific Coast of South America was checked through the discovery and use of fish to devour the eggs and larvae of the mosquito. The usual methods of preventing the breeding of mosquitos was ineffectual inasmuch as the people failed to carry out the well-known precautions. Efforts to keep water containers covered were equally unsuccessful. Finally it was found that by distributing fish, two to four small fish to a container holding ten to fifteen gallons of water, the problem was simplified by about 75 per cent, with a lower resulting mosquito index than had been possible to get in any other way. The

distribution of 750,000 fish conquered the epidemic.

It is interesting to note that in malaria control as well as in operation against yellow fever, fish are now playing a most important role. In the southern part of the United States fish are being extensively used to control the breeding of the malaria mosquito. In some localities, even though drainage and oiling is practiced, the employment of fish to destroy the mosquitos is the chief or even sole reliance. In a group of five counties in Alabama practically every farmer has convenient access to a minnow hatchery from which he is able to stock breeding places with fish as occasion arises. The city of Richmond, Virginia, has stocked all its fountains, reservoirs and lakes with minnows and has established hatcheries to furnish the fish free of charge to any communities in the state that want them.

An interesting phase of the work is indicated in the fact that in fighting yellow fever, malaria, hookworm and other diseases in communities where the people heretofore have been ignorant and lax in adopting measures for the prevention of disease, there has been stimulated a general interest in the promotion of public health, and now the health officers, public health nurses and medical men who are spreading public health propaganda are welcome.

A. M. A. TO COMBAT SOCIALISTIC MEDICINE

THE American Medical Association, the parent of all of the reputable medical societies in this country, failed to heed the handwriting on the wall concerning many uplift schemes that threaten the destruction of the medical profession as a profession until forced to do so by the great wave of opposition to the do-nothing policy which has prevailed for some years. Those men in the medical profession who have been asking that something be done to save the profession from State Medicine and a lot of other things that work to the profession's detriment were accredited with being alarmists and even disturbers of the quiet serenity of the great parent body that continued to slumber on under the guidance of a few leaders who, secure in their professional or economic berths, have been inclined to believe that every one else is as secure as they are. Fortunately the tide has changed and now the A. M. A. is inclined to listen to the warnings that have been freely given for several years but of which no heed was taken. Now the Association is inclined to get busy in an attempt to stem the tide of adverse public sentiment and even legislation which threatens to abolish private practice entirely through the advent of State Medicine of one form or another.

The ignorance of the public concerning medical questions, and ignorance that was perpetuated because of the silence of medical men who should have been moulding public opinion, is to be corrected through the medium of a medical journal for lay people to be published by the great American Medical Association. There also will be established in Washington a legislative bureau, in charge of capable representatives, for the distinct purpose of bringing pressure to bear for the securing of wise and beneficent medical legislation as well as preventing legislation that threatens to be vicious. This same bureau will keep the medical profession of the United States posted as to what Congress is considering in the way of medical or public health legislation. It is expected that the American Medical Association through a legislative committee also will keep in touch with legislative affairs in the several states and give aid and counsel to state medical associations in securing wise and beneficent state legislation or in preventing the passage of obnoxious medical laws.

This is something that should have been done long ago, but the short-sighted leaders of our medical profession evidently have considered that it was beneath their dignity to have anything to do with politics, though every one but the doctor knows that the only way to accomplish anything in the way of legislation is to get into politics and work the game just as other interests work it in order to secure the desired ends. It may offend the dignity of some doctor to ask him to take a hand in politics, but if he desires to save his profession and his own vocation he will have to get into politics or get a representative that will do it for him and do it well. Then there are uplift schemes, innocent appearing on the surface, which deserve to be "swatted" by the medical profession, and especially by the American Medical Association. These schemes are too numerous to mention, but in passing we may mention the Sheppard-Towner fiasco, the iniquities of foundation control of medical education and experimental medicine, the control of medical policies in hospitals and other public and semi-public institutions by lay persons or organizations, bureaucratic medicine, and lastly, the aggressiveness of public health officials in their efforts to usurp the place of the general practitioner of medicine. All of the Utopian but impractical schemes that we now are fighting mean, if they are adopted, that not only will the private practice of medicine be abolished but we will have bureaucratic medicine with all of its ills, and a distinct lowering of the standards which prevail at the present time through the loss of incentive for capable men to enter the medical profession.

The battles we are waging and will have to wage in the future do not wholly concern the

welfare of the physician himself, but have to do with the welfare of the sick and disabled people of this country who are suffering now from the effects of sordid greed and quackery. These ills from which the public suffers are brought about through the apathy and indifference of medical men who have failed utterly to educate the public along right lines concerning the privileges and restrictions which should encompass all that pertains to the healing art. We have been a long time waking up to the dangers that threaten and it is an encouraging sign of the times when the great American Medical Association takes cognizance of the situation and attempts to remedy evils by belated action.

SOCIALISTIC TENDENCIES IN MEDICINE

In recent years, under cover of promoting the welfare of society or of some part of it, James A. Gardner, Buffalo (*Journal A. M. A.*, Aug. 12, 1922), states that many so-called reforms have been inaugurated which, in reality, are little more than the outcome of the emotional desires of restless faddists or of the ideas of extreme and radical discontents. The contention is sane that all reforms of whatever nature should be made only after patient and scientific investigation of the causes and the cure of the evil sought to be corrected, and that the desire to bring about such reforms presupposes knowledge obtained by serious investigation and careful research, unhampered by emotion or prejudice. The field of medicine has been a fertile one for the agitator and the propagandist. Reformers and uplifters have been allowed to invade, unopposed, the practice of medicine and surgery, until the time has arrived for raising the danger signals. The peril of the situation becomes more urgent when it is realized that the public is being educated to believe that the socialization of the medical profession will bring higher standards of health. The fact is that, with the initiative and individuality of the physician removed, the profession will cease to attract to it men of energy, ability and ambition, who are now keeping American medicine in the front rank of intellectual and scientific achievement. Prevention and education need the aid of the government; but the state should not compete with individual skill and superior knowledge and efficiency in the care of those who have money to pay and so should not be treated at public expense. Public health is the musical instrument easiest for the welfare worker to play, and the softest chord is the venereal problem. It is not wise for a state to pauperize its people, nor is it fair to the medical profession to deprive it of its legitimate livelihood. The physician has always been too busy looking after the needs of his patients to give much time to his own interest. Unless he awakens to the drift of the tide, there will soon be little inducement for a young man of real ability to enter the medical profession. The field of social welfare or social reform has developed to such an extent in recent years that it is now a recognized profession, remunerative and popular. The solution of this problem is suggested by Gardner under three heads: (1) There should be a social service, ably trained to make real and thorough investigations and competent to distinguish between the needy poor and those possessing the ability to pay. (2) There should be an awakening of the medical profession to the realization that it is equally responsible for this pauperization. There should be censorship of the services of the physician by some responsible body like the county medical society, as has been done in contract practice, so that patients able to pay should not be cared for gratuitously. (3) There should be education of the public to an understanding that if the standards of medicine are lowered through the loss of impetus and initiative in the young physician, the public will be the chief sufferer.

AND NOW THEY SEEK AN ANTI-CORSET LAW

"The organization of an anti-corset society in Indianapolis, having for its purpose the passage of laws prohibiting the wearing of corsets, forces us to wonder if we are in for a prolonged period of damfoolery, with every harebrained idiot in the land sitting in judgment on the clothes we wear, and on all our personal habits. One day we are invited by one set of cheerful idiots to wax indignant because young girls do not wear corsets at a dance, and now to become outraged because they do. With these long-haired men and short-haired women undertaking to determine the dress of womankind, critically passing on the length of skirts and the fullness thereof, making a scandal out of the use of rouge and powder, inviting a cyclone of censure because of the awful discovery that a seventeen-year-old girl carried a little mirror in her bag, and now with the plan to make it criminal to wear a corset, it is about time that common sense steps in and prevents the making of a mockery of our laws. The next move will be to make it criminal to wear silk hose—because they are associated with vamps. There are all too many half-baked reformers in this country who will never be satisfied unless they convert the women into slovenly, slattern, sloppy things, and make life unspeakably drab for all of us."—*The Fort Wayne Journal-Gazette, August* 29, 1922.

THE SMALL INVESTOR

Not every doctor becomes an investor, but some do save money which they desire to put into an investment in the hope that it will bring

an income. Few if any doctors are what are known as large investors in the sense that they have large amounts to invest. The vast majority are what are known as small investors. It is the small investor, with the desire to reap large returns from his investment, who generally gets stung by the ever present stock salesman with his glib tongue and rosy promises of great returns from investment.

"That stock is not a good one for the small investor," said a man who knows a great deal about securities. Just why the man who was well informed about stock propositions gave this advice is well to consider. Buying stock is a form of spending money for a good or a bad thing, either in a gamble or a well protected business enterprise. It is not good business for the small investor to risk his hard earned money on a gamble. Of course he may win, but the laws of chance are against him. When it comes to taking chances, risk only the money you can afford to lose.

Of course stock salesmen will tell you that the only reason they are offering their proposition to the small investor is to keep the control of the company from going into the hands of two or three very wealthy men. That may or may not be true. The important thing for the small investor to consider is, "Is the proposition safe enough for me to place my money in it?" Highly speculative propositions are a good bit like betting on a horse race: Occasionally a hundred-to-one shot goes across and wins money for the one who takes a chance, but they are so rare that few people ever make any money on them.

The small investor wants to keep before him this thought, "Suppose I need this money next week, in two weeks, a month, or possibly a year from now, what can I get from this stock if I sell it?" The majority of these wonderful "ground-floor" propositions that high pressure stock salesmen unload on the average small investor have very little value when the buyer needs the money and has to sell. The small investor has to take the loss when he needs the money the most.

It is, therefore, better for the small investor to put his money into something safe and to build it up for the future than to be using his money buying stock of get-rich-quick schemes which amounts to about the same as using money in shooting craps to win a fortune.

If the stock you are offered is not well surrounded by safety, figure out how much you can afford to lose before you buy. Then put in it only the money you can afford to lose. Learn all you can about a stock before you buy, and obtain the desired information from your banker or from a reliable and well established bond house.

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages; but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

For the good of the public it would be wise to have a special licensure for specialists and grant certificates for the practice of a specialty only when the applicant proves that he is properly qualified. This special proof should not be extended to anyone who has not been thoroughly educated in the specialty selected and who has not had special practice in a medical school or in special hospitals. In no other way can the public be protected from the horde of pseudo and half-baked specialists that now infest the country. So much poor work is being done in the name of surgery that unless it is checked the reputation for surgery in general will fall into disrepute.

WELCOME State Senator Dennis Fleming, of Georgia, to the company of super-regulators. He has introduced a bill which provides that "any and all married men who shall go fishing without the consent of their wives shall be guilty of a felony, and their sentence shall not be less than five or more than twenty years at hard labor." Since the ideal of an increasing number of Americans is a state in which all things are dealt with by law, from red neckties to double negatives, we might as well hurry the movement along and acquire a government under which all citizens are standardized according to size, color of eyes and general deportment—the nonconformists being chloroformed. Then we'll know at once whether life is worth living.—*Illinois Medical Journal*, September, 1922.

IF the plan of the Indiana State Medical Association to furnish automobile insurance to its members is carried out successfully as contemplated by the report of the committee presented at the Muncie session, the cost of automobile insurance to the doctors of Indiana will be reduced about seventy-five per cent. We always have contended that automobile insurance is a

system of highway robbery, and the profits derived from that class of business are enormous as attested by the financial report of a well established company. It certainly will mean something to the doctors of Indiana to carry automobile insurance for about one-quarter of what they are paying now and, accordingly, we are very much pleased to know that the plan as outlined at the Muncie session in all probability will be put into effect.

A LITTLE knowledge is a dangerous thing. This is exemplified in the advice and opinions expressed by school examiners who look wise and pass judgment concerning conditions that they know little about. School examiners will send notices to parents stating that a child is nearsighted when perhaps the trouble is far sightedness, or perhaps the child has no error at all, or may advise a tonsil and adenoid operation or some other attention that is not indicated, and a competent physician sometimes has great difficulty in convincing the parents that the advice given is incorrect or should not be taken too seriously. If the school nurses and other examiners not qualified to pass judgment upon the needs of children merely would send notices to the parents asking them to consult a physician, and leave the matter of diagnosis and treatment to the physician, much confusion and misunderstanding would be avoided.

AT the last or Muncie session of the Indiana State Medical Association a resolution was introduced calling upon the State to abolish salaries of medical men who act as employees of the State in teaching capacities while at the same time enjoying private practice in competition with other physicians. The House of Delegates very wisely referred this to a committee for investigation, with instructions that the committee shall meet with the board of trustees of the medical department of the State University and such other persons as required to furnish evidence, and obtain full information as to the management and policies of the medical department of the University and the hospital connected therewith. The whole idea of this plan is to make the medical profession of the state fully conversant with the manner in which the medical school and hospitals connected therewith are conducted, and to bring about a closer affiliation and harmony between the Indiana State Medical Association and the medical department of the University. This is a step in the right direction and ought to result in great good for all concerned.

THE House of Delegates, at the last session of the Indiana State Medical Association, took action on the feature of the Indiana Workmen's Compensation Act which fixes the liability for medical and surgical services in connection with accident cases to not exceed sixty days. Most of the accident insurance companies make it appear that they are responsible for thirty days only. As a matter of fact in accident cases the attending physician or surgeon should recover for *all* treatment and care necessary, no matter whether it is concluded within thirty days or ten times thirty days. The Compensation Board and the insurance companies know perfectly well that there are many accident cases in which the after care can not be concluded within either thirty or sixty days, and there is no just reason why the attending physician should be made the "goat" for the benefit of a grasping insurance company. The House of Delegates has asked that there be an amendment to the Indiana Workmen's Compensation Act so that all treatment and care necessary in accident cases shall be provided and paid for by the employers or by the accident insurance companies representing them.

TONSIL surgery is a great fad among practically all physicians of the present day, and it is unfortunate that such a very valuable measure in selected cases is shamefully abused in both conception and execution. Physicians without any training of any kind whatsoever are attempting to remove tonsils and adenoid tissue, with the very natural result of mutilating many throats to say nothing of performing the operation in instances where it is not indicated. The amusing feature of the proposition, and one that is making the public skeptical, is the fact that it is such a regular feature with some general physicians who are attempting tonsil surgery to advise a tonsil and adenoid operation in every child, that they frequently advise such operations when no tonsils are present, the child having had a tonsil operation done previously in a very skillful and efficient way. We have no fault to find with the men who attempt to do things for which they are qualified and trained, but it does seem inconsistent to talk about the incompetency of quacks and charlatans when our own brethren exhibit such a woeful lack of the training that they should have to carry on the work that they are attempting to do.

THERE are in round numbers 142,000 physicians, 43,000 dentists and 45,000 drug stores in the United States. In the latter instance there are probably three druggists to every drug store, making a total of 100,000 druggists. These professions if properly organized and working cohesively can be made the greatest factor for good in the country. No legislation inimical to the best interests of the public and the professions named could be placed on the statute books with this organization working coherently. Not a home in the state or nation that is

not reached by some doctor during the course of the year; perhaps not an individual in the nation who is not met face to face and engaged in personal conversation by one of the three professions in the course of the year.

What a power if organized would be the doctors, dentists and druggists of the United States in combating medicinizing socialization schemes, schemes for health centers, clinics, compensation laws, health insurance, Sheppard-Towner Maternity Acts and in heading off Federal interference in medical practice by such menaces as the regrettable maternity bill and the other fifty-seven varieties of attempts to bring about State Medicine.—*Illinois Medical Journal*, September, 1922.

EASY MONEY

In the course of our wide reading, for the benefit of JOURNAL subscribers, one of us found, in the *Police Gazette* of July 1st, the following advertisement which we have photographed:

ANYONE : : ANYWHERE

Men or Women

You Can Easily Learn to Be a Doctor

We give you easy lessons by mail and give you a beautiful Diploma. We teach you to treat all kinds of sickness. You can open a Doctor's Office in your own home and

EARN $5,000 YEARLY

Many Doctors earn $5000 a year and more; some upwards of $10,000 a year. What others are doing You should be able to do

A Diploma Gives You the Same Opportunity and is Evidence that You are Master of a Profession of Dignity, Prestige and Influence!

WE GIVE YOU EASY LESSONS BY MAIL

You can become a Doctor by only a little study in spare time at home

A Common School Education is all That is Necessary
If you desire to enter an uncrowded field.
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Merely send us your name and address and we will send you full information by mail Free, with cost or obligation. For free information, address

University Advertising Department
2nd Floor, 4250 Cottage Grove Avenue
CHICAGO ILLINOIS

N. Y. State Journal of Medicine, August, 1922.

—*Illinois Medical Journal*, September, 1922.

SECRETARY COMBS reports that the attendance of registered members at the Muncie session was 522. By consulting the files of THE JOURNAL it was found that previous registrations were as follows: Indianapolis 1915, 646; Fort Wayne 1916, 381; Evansville 1917, 270; South Bend 1920, 425; Indianapolis 1921, 500. It will be seen that in point of size the Muncie session eclipsed any previous session held outside of Indianapolis, and the Association certainly made no mistake in accepting the invitation of the members of the Delaware-Blackford County Society to be their guest. There also were approximately 200 ladies in attendance at the meeting. The number of visiting ladies has been increasing of late years, and it behooves the local committees entertaining the State Association to make ample provision for the proper entertainment of them. One of the most unpleasant situations arising in connection with the annual sessions is the problem of holding the attendance for the Friday afternoon session. It was quite disappointing this year that no one of the three vice-presidents was in attendance Friday afternoon to preside over the meeting when the president was obliged to be absent. In the emergency, the secretary secured the services of President-elect Dr. Good, who efficiently occupied the chair. Vice-presidents are elected not only to honor prominent members of the profession and their constituent societies, but also for the purpose of having available at any time a presiding officer for the general meetings.

As an evidence of the trend of lay opinion, the *New York World* has the following to say concerning the chiropractic situation:

"Fair play to the public would require adequate education of chiropractors—for example, a regular medical course plus specialized postgraduate work expected of a specialist in other fields of medicine.

"In such a course many would-be chiropractors would come to the conclusion that manipulation of vertebræ is not a cure-all, whatever its possibilities.

"Fair play to the public demands that chiropractic processes should be used only by men who know thoroughly what they are doing and why. Both common sense and science deny that all ills are traceable to the spine.

"Fair play to the public demands a strict curb on a great mass of quackery masquerading under the name of chiropractic. Fair play to the public would send a substantial percentage of chiropractors either to school or to jail.

"Adequate education might develop some competent healers of a limited group of diseases from the crowd of incompetent meddlers. But, given education, it is probable most of them would cease to be chiropractors."

As the *Ohio State Medical Journal* well says, "If the public is genuinely concerned about the protection and preservation of its health, it eventually must demand of its law-making representatives that statutes be enacted which will require certain definite minimum standards for *all* who treat the sick in any manner whatever. These requirements might properly be set at two years' work in an approved college of arts and sciences followed by a four years' course in a standardized scientific school. It is a hopeful indication that the most clear thinking lay writers now realize that a thorough education in the fundamentals is essential in order that the public be protected from mercenary motives as well as

from ignorance. They see through the preposterous contention of the chiropractors who claim that 'diagnosis' is unnecessary."

General elections will be held next month. How many doctors have registered so they can vote and how many doctors will take the trouble to find out how their vote shall be cast in order to effect the greatest good for the medical profession as well as for the public? The average doctor bears the label of a political party, and he blindly follows the party irrespective of whether the candidates stand for right principles or not. We should not forget that the pseudo-medical cults not only have some of their own members running for the legislature but they are industriously working for other candidates who have made a pre-election pledge to help these cults. What has the regular medical profession done to find out how candidates for the legislature stand on important questions and how many doctors are taking the trouble to acquaint their friends and acquaintances with the facts? One of the leading chiropractors of Indiana, at the head of a chiropractic college, has served one term in the legislature and now is a candidate for a second term. He was placed on the ticket because the regular medical profession did nothing to prevent him from obtaining such position. He was elected once, and will be elected again because of the apathy and indifference of medical men. It is a reflection upon the regular medical profession. The pseudo-medical cults are organized, and to a man they put time, effort and money into a political campaign to further their interests. We are unorganized except for scientific purposes, and we either put no time, effort or money into efforts to uphold the principles we represent or we give such grudgingly and sparingly. We have no just cause for complaint when we are trampled upon. We get just what we deserve.

IN Michigan the battle wages merrily as to whether the University shall establish a separate department of nursing which shall be entirely independent of the medical profession. The *Journal of the Michigan State Medical Society* says that some of the self-appointed leaders in the nursing profession, in discussing the subject, have said, "We are not going to take orders from the doctors and henceforth we will perform our nursing service under our own direction and not under the direction of the doctor." As we understand the plan, which, by the way, has been proposed by the Rockefeller Foundation with a one million dollar endowment as the bait to bring about acceptance, the University is to have a department of nursing which is just as distinct a department as is the department of medicine or law, and it is to operate independent of any other department. The final product turned out by this department is to be a "super-nurse," or one who is supposed to possess knowledge greatly in excess of the knowledge possessed by the ordinary trained nurse who has had the advantage of contact with patients and members of the medical profession, though the super-nurse is not required to have any such fundamental knowledge.

As has so well been stated by leading medical men and medical publications in this country, there is little need for "super-nurses," and certainly no need for the fifty thousand proposed by the Rockefeller Foundation. We already have enough highly trained nurses to meet all of the requirements imposed by the limited amount of technical work which they are prepared to do, but we are short of practical nurses, or the kind of nurses that are of real service in the sick room, whether the sick room be in hospital or home. If the directors of the Rockefeller Foundation desire to do something worth while for suffering humanity, and along this line contemplate dabbling with the question of educating the nurse, we suggest that efforts be made to increase the number of practical nurses by several hundred thousand and thus give the sick or those that need the nurses a chance.

DEATHS

AUGUSTA STONE, wife of Dr. C. E. Stone, of Vincennes, died August 15.

JOSEPH C. PURDY, M. D., of Terhune, died August 15 at the age of sixty-eight years.

STEPHEN M. BENNETT, M. D., of New Goshen, died September 2, at the age of seventy-five years. Dr. Bennett graduated from the Eclectic Medical College of Cincinnati in 1873.

DAVID R. CARTER, M. D., of Epsom, died September 4 at the age of seventy-four years. Dr. Carter graduated from the Emory University School of Medicine, Atlanta, Georgia, in 1883.

OLIVER S. COFFIN, M. D., died at his home in Alexandria, September 5. Dr. Coffin was eighty-one years of age. He graduated from the Indiana Eclectic Medical College, Indianapolis, in 1888.

JAMES G. WEBSTER, M. D., of Colfax, died September 9 at the age of 93 years. Dr. Webster was born in England and came to this country at the age of fourteen years. He graduated from the New York University Medical College in 1864.

J. T. TRESIDDER, M. D., of Tipton, died August 28, as the result of tuberculosis, aged fifty-nine years. He graduated from the St. Louis Hygienic College of Physicians and Surgeons in 1890. Dr. Tresidder was a member of the Tipton County Medical Society, the Indiana State Medical Association and the American Medical Association.

JOHN H. BULL, M. D., of Indianapolis, died September 17 in a sanatorium at Battle Creek, Michigan. Dr. Bull was forty-five years of age. He graduated from the Medical College of Indiana, Indianapolis, in 1903, and held membership in the Marion County Medical Society, the Indiana State Medical Association and was a Fellow in the American Medical Association.

E. M. HOOVER, M. D., Elkhart, died August 25, as the result of an apoplectic stroke. Dr. Hoover was fifty-two years of age. He graduated from the University of Illinois College of Medicine, Chicago, in 1906, and was a member of the Bartholomew County Medical Society, the Indiana State Medical Association and was a Fellow in the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers, for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

THE Huntington County Medical Society held a meeting at Huntington, September 5. Dr. R. S. Galbreath presented a paper.

THE Sheppard-Towner Maternity Act has been rejected by the governor of Maine. His rejection holds good at least until the next legislature convenes.

DR. W. C. LANDIS has been appointed director of the Child Welfare committee of Elkhart League of Women Voters to succeed the late Dr. E. M. Hoover.

THE Wabash and Grant County Medical Societies held a joint meeting at Lafontaine, September 14. Dr. Herman Kretschner, of Chicago, presented a paper.

THE Kosciusko County Medical Society held a meeting August 28, at Leesburg. Dr. Paul A. Garber, of Sidney, presented a paper on "Life Insurance Examination."

RADIO medical service has been established by the United Fruit Company whereby their ships at sea without physicians may obtain advice by radio concerning the treatment of sick.

THE Sullivan County Medical Society held a meeting at Carlisle, September 13. A paper on "Tuberculin and Vaccines in the Treatment of Tuberculosis," was presented by Dr. G. C. Johnson, of Evansville.

THE Howard County Medical Society held a meeting at Kokomo, September 1. Following a dinner, Dr. B. R. Kirklin, of Muncie, presented a paper, the subject being "Pathological Conditions of the Gall Bladder."

DR. R. H. BRAUNLIN, of Marion, has purchased the office equipment and office of the late Dr. M. H. Krebs, at Huntington, and will take up the special practice of the eye, ear, nose and throat at that place.

THE Thirteenth District Medical Society held a meeting at Rochester, September 1. Dr. H. O. Shafer, of Rochester, was elected president of the society; Dr. J. N. Kelly, of Westville, vice-president, and Dr. J. A. Work, of Elkhart, secretary-treasurer.

DR. STEPHEN SMITH, of New York, died August 26, at the age of 99 years and 6 months. Dr. Smith was joint editor of the New York Journal of Medicine and editor of the American Medical Times. He was the author of several books and was a member of the Council of Hygiene of New York City, the investigations of which led to the creation of the Metropolitan Board of Health. He was instigator and first president of the American Public Health Association.

SHOULD the bill introduced by Representative Sproul be enacted a law, a reward of one million dollars is to be offered by the United States government for a successful cure of tuberculosis, cancer, paralysis, epilepsy or dementia praecox. The provisions of the bill call for the payment of the reward in ten annual installments to be made by a board consisting of the surgeon generals of the Army, Navy and U. S. Public Health Service, who would be called upon to investigate claims for any such discovery.

THE United States Civil Service Commission announces an open competitive examination for laboratory aid in bacteriology on November 8, 1922. Vacancies in the Bureau of Animal Industry, Department of Agriculture, for duty at Denver, Colo., at $900 a year, and vacancies in positions requiring similar qualifications in Washington, D. C., and elsewhere at this or higher or lower salaries, will be filled from this examination. Applicants should at once apply

for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C., or to the Secretary of the United States Civil Service Board.

THE Seventh District Medical Society will hold its annual meeting at Indianapolis on October 26, at the Indiana Dental College. The following program has been arranged:

Afternoon

1. President's address.....Dr. R. C. Ottinger
2. Syphilis versus Carcinoma of the Cervix Uteri.....Dr. A. S. Jaeger, Indianapolis
3. Obstetrics as Practiced in the Country.. .....Dr. O. T. Scamahorn, Pittsboro
4. Digitalis Therapy ....Dr. Edgar F. Kiser, Indianapolis

Evening

7:00 p. m.—Dinner at Columbia Club.

1. Functional Nervous Disorders of the Chronic Invalid" ....Dr. Hugh T. Patrick, Chicago

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ALEXANDER RIGHTER CRAIG, M.D., Secretary of the American Medical Association since 1911, died September 2, at the age of 54 years. He was a graduate of the Franklin and Marshall College, Pennsylvania, and of the medical department of the University of Pennsylvania. He was granted honorary degree of Doctor of Science by Franklin and Marshall College. Dr. Craig served Pennsylvania continuously in the House of Delegates from 1903 to 1910. Since 1911 Dr. Craig has devoted his entire time to the work of the American Medical Association. He was a member of the American Academy of Medicine and president in 1912, and a member of the American Academy of Ophthalmology and Otolaryngology. Dr. Craig was active in religious and social work. Death occurred while on his vacation trip at Port Deposit, Maryland, and was the result of uremic poisoning.

IN addition to the articles enumerated in our September Journal, the following articles were accepted during August for inclusion in New and Nonofficial Remedies:

H. K. Mulford Company:
- Mercurialized Serum No. 2—Mulford;
- Mercuric Succinimide Hypodermic Tablets No. 50.

Parke, Davis and Company:
- Adrenalin and Cocaine Tablets Rx B;
- Adrenalin Tablets No. 2;
- Bromotone Capsules, 5 grains;
- Tuberculin (old) and Control for the Von Pirquet Test;
- Tuberculin Ointment for the Moro Test.

During September the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

H. A. Metz Laboratories:
- Novocain and L-Suprarenin Tablets "H";
- Novocain Solution, 1 per cent;
- Novocain Base;
- Novocain Nitrate;
- Pyramidon Tablets.

United States Radium Corporation:
- Ampules Radium Chloride 2 Cc-U.S. Radium Corp. (Radium element, 5 micrograms);
- Ampules Radium Chloride 2 Cc-U.S. Radium Corp. (Radium Element, 10 micrograms);
- Ampules Radium Chloride 2 Cc-U. S. Radium Corp. (Radium Element, 25 micrograms).

Winthrop Chemical Company:
- Fereo-Sajodin.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District	Councilor	Number of Counties	1921 Memberships	1922 Memberships to Date	Percentage
First	Dr. Willis	7	176	175	.99
Second	Dr. Smadel	7	149	145	.96
Third	Dr. Leach	9	130	118	.90
Fourth	Dr. Osterman	10	138	136	.98
Fifth	Dr. Welnstein	5	158	163	1.03
Sixth	Dr. Spilman	8	150	160	1.07
Seventh	Dr. Earp	4	425	444	1.04
Eighth	Dr. Conrad	5	172	168	.97
Ninth	Dr. Moffit	10	253	256	1.01
Tenth	Dr. Shanklin	5	151	145	.96
Eleventh	Dr. Black	6	191	194	1.02
Twelfth	Dr. Calvin	8	241	247	1.02
Thirteenth	Dr. Bertelling	8	274	256	.93
		92	2608	2697	

INDIANA STATE MEDICAL ASSOCIATION

Muncie Session

September 27-29, Inclusive, 1922

HOUSE OF DELEGATES

FIRST MEETING

The House of Delegates met in the Grill Room of the Hotel Roberts, Muncie, at seven p. m. September 27, 1922, the president, Dr. W. R. Davidson of Evansville, presiding.

Roll-call of delegates.

Moved by Dr. George R. Daniels that the minutes as printed in THE JOURNAL be adopted. Motion seconded and carried.

Moved by Dr. George R. Daniels that the report of the secretary-treasurer as printed in THE JOURNAL be adopted. Motion seconded and carried.

Dr. James N. McCoy, Vincennes, chairman of the Committee on Automobile Insurance, made the following report, and moved its adoption. Motion seconded.

REPORT OF COMMITTEE ON AUTOMOBILE INSURANCE

House of Delegates,
Gentlemen:—

This Committee has proceeded with its work on the basic idea that a member of the State Medical Association is, from the nature of his work and his character as a member of a reputable profession, a preferred

risk for automobile insurance. The rates among the standard companies have gone to practically prohibitive figures for the doctor, as well as every other honest policy holder, because heretofore with every concern writing automobile insurance the doctor and other reputable automobile drivers have been insured at an even rate with reckless and criminal drivers. The Committee has, therefore, sought to obtain automobile insurance for the members of this association at rates which they believe proportionate to the moral hazard and actual risk of the insurance.

Your Committee has considered and investigated several procedures as follows, to-wit:

1. Insurance of the members of this Association with standard stock companies. This was found impossible because the standard companies are based on the maintenance of local and general agencies, which agents receive one-half of the premium written and the representatives of the standard companies whom we interviewed believed this would disorganize the agency force. And they gave us the further objections that automobile insurance at the best was not desirable and two of these standard stock companies stated to the Committee that they were contemplating retiring from this field of insurance. The fact is that the rates charged by this class of insurance companies are practically prohibitive.

2. The organization of a stock company or a reciprocal organization within and for the membership of this Association. It was found by consulting legal authority that the provisions of the Indiana statutes made this difficult and for the time being impossible. The first essential to the formation of a stock company would be the sale of $50,000 worth of stock. The first essential to the formation of a reciprocal association would be to deposit with the Auditor of State, securities in the amount of $25,000, together with 250 policies written on automobiles. Neither of the above procedures was deemed advisable, by reason of lack of time and the lack of authority of the State Medical Association to proceed. It was believed that it would be very difficult to do either of the above, even though no obstruction existed.

3. The execution of a contract between the State Medical Association and some reputable reciprocal organization, whereby the said reciprocal organization, in consideration of the large volume of business to be obtained, and by reason of the fact that the members of the State Medical Association constitute preferred risks for automobile insurance, would write individual policies for the members of the State Medical Association through the offices of the Secretaries of the various County Medical Societies at a premium rate which would be practicable for the said reciprocal organization and desirable to the members of the State Medical Association. The members of your Committee, before proceeding further toward the execution of a contract with a reciprocal organization, believed it necessary to inform themselves authoritatively on the legal phases of automobile insurance in general and as to the rights and liabilities of a policy holder dealing with a reciprocal organization, in particular. The legal firm of Emison & Hoover, a firm composed of reputable and dependable lawyers, was therefore employed to give a legal opinion to the Committee, covering the entire subject of automobile insurance in general and the rights and liabilities of the holder of a policy from a reciprocal organization in particular. The legal opinion of the said firm of Emison & Hoover is herewith submitted in full.

Dr. J. N. McCoy, August 8, 1922.
Vincennes, Indiana.

Individuals, partnerships and corporations of this state may exchange reciprocal or inter-insurance contracts with each other, providing indemnity among themselves from any loss which may be insured against relating to all classes of automobile insurance. The above mentioned parties are hereinafter designated "subscribers."

Such contracts may be executed by an attorney, or other representative designated attorney, duly authorized and acting for such subscribers. They may designate where the attorney's office is to be.

The subscribers through their attorney shall file with the Auditor of the State a verified declaration, setting forth:

(a) Name adopted by such subscribers.
(b) Kind or kinds of insurance to be exchanged.
(c) A copy of the form of policy contract.
(d) A copy of the form of the power of attorney.
(e) Location of office issuing such contracts.
(f) Bona fide applications of 250 separate risks, aggregating not less than $1,500,000.
(g) That such attorney has possession of assets for payment of losses—according to requirements hereinafter stated.
(h) A financial statement under oath in form prescribed for annual statement.
(i) An instrument authorizing service of process.

At the same time, the attorney shall also file with the Auditor of State an instrument executed by him for said subscribers, conditioned that upon Certificate of Authority (issuance of Inter-Insurance License) service of process may be had upon the Auditor of State in all suits in this state arising out of such policies, which service shall be binding upon all subscribers exchanging at any time Inter-Insurance contracts through such attorney.

There shall at all times be maintained as assets a sum in cash or securities, amounting to 50 per cent of the net annual deposits, collected and credited to the accounts of subscribers, in addition also cash or securities assets sufficient to discharge all liabilities on all outstanding losses arising under policies issued. Net deposits shall be construed to mean the advance payments of the subscribers after deducting the amount agreed upon for expenses. The assets shall not be less than above or $25,000.00.

The attorney shall make a report under oath to the Auditor of State each year giving the financial condition of affairs.

The attorney shall pay annually such taxes, licenses and fees as are required to be paid by a mutual insurance company.

The attorney may insert in any form of policy prescribed by the laws of this State any provisions or conditions required by the plan of reciprocal or Inter-Insurance provided the same shall not be inconsistent with the law of this State.

The theory of the reciprocal or Inter-Insurance is "insurance at the lowest possible rate." Early Automobile Insurance was attempted by the old line companies but automobile insurance with them was experimental and rates excessive. Later automobile insurance companies grew up. They were also expensive. Then the reciprocal law came into existence. It grew up as a result of a demand for cheaper rates. The cheaper rates were accomplished by not having to pay a stock dividend (of all the way from six to ten per cent), by cutting out the commission of a district agent, by doing away with the state agent who received his fee; it did away with the expensive and high salaried offices of president, vice-president, secretary and treasurer. The only expense of a reciprocal organization is that of the attorney.

The attorney is the sole negotiator. He represents both sides. His powers are limited by such articles of agreement as may be adopted by the subscriber.

The theory on which such an association is organized is as follows:

Suppose there are four men in a room (designated A, B, C and D), wanting to indemnify each other against losses as a result of automobile accidents. While the four men are talking, another man (E) comes in and says he would like to get in on it. In order to simplify matters A (attorney) acts as spokesman and asks B, C and D if they are willing to take in E. They all answer "yes" and as a result A negotiates with E. Thus you see that A represents E and also A, B, C and D. As such association grows, it becomes necessary to give A (attorney) certain powers in advance in order to facilitate matters. These powers are enumerated in the articles of agreement. The Attorney-in-fact may be an individual, a partnership or a corporation.

The manner in which such associations are formed is as follows:

A person goes on the street and hunts up 250 friends and asks if they would take out insurance. They accept. The next step is to have $25,000.00 on deposit (by ruling of the Commission of Insurance) in Indianapolis with the Insurance Department. The attorney then makes application for license to issue Inter-Insurance. If such application is granted, he then again sees the 250 men and signs them up for insurance. This person (attorney) acts as your agent in all negotiations. If the 250 want to expand, the attorney solicits subscribers for them.

All premiums are paid to the attorney. Suppose this association styles itself the X Y Z Association. The attorney issues the policy to the new subscriber in behalf of the X Y Z Association. If there is a loss the Attorney signs the check X Y Z Association by "A," Attorney. The X Y Z Association

compendious name for all the subscribers. The attorney makes use of this compendious name in behalf of all the subscribers.

The Attorney is the only expense connected with such insurance (other than losses due to accidents).

Generally the power of Attorney is as follows:

He shall make, issue, change, modify, reinsure or cancel contracts of insurance, containing such terms, clauses, conditions, warranties and agreements as the subscribers shall empower him to. He may demand, collect, receive and receipt for all moneys due the subscriber, or for credit to his account. He may perform or waive all agreements.

He is your agent to accept service and appear for the subscriber in suits, to prosecute, defend, compromise, settle or adjust the same. He executes all documents necessary to comply with the law. In other words, the Attorney is the subscribers' agent and can do just what the articles of agreement permit him to do.

As to Liability: Suppose that the sufficient losses occur so as to necessitate a greater amount of money than is on hand. In such a case just what is the liability of the subscriber? On September 1, 1921, Attorney General of Indiana, Mr. Lesh, said it could be determined by the subscribers. For instance, if there are 250 subscribers, they can agree that no subscriber shall be held for more than 1/250 of the loss. It is a several liability which can be limited as the subscribers see fit.

One of the disadvantages of such insurance lies in the fact that service can be had on any one subscriber and if the Attorney refuses to appear the subscriber has to defend the suit. Of course, the subscriber has recourse against the Attorney. If should be stated, however, that such a disadvantage is only theoretical since the Attorney in your instance (chosen by the subscribing physicians) will undoubtedly appear.

As to Mutuals:

In 1915 the legislature passed an act authorizing the organizing of mutual insurance companies with limited powers. By this act insurance of indemnity is provided for loss in case of auto accidents, theft, etc., other than bodily injury to the person. Twenty or more persons, majority of whom must be bona fide residents of the State of Indiana, may associate themselves together as a corporation under this act. They must make application to the Auditor of State and specify in their application the purpose of the association, and the place of the home office, which must be somewhere in Indiana. Before the Association is permitted to do business, it must have at least 200 risks which must aggregate at least $500,000.00. The Association is limited in the amount of any one risk. No one risk can exceed in amount three times the average risk. The statute also provides that the maximum risk may equal one percent of the aggregate insurance in force. If the aggregate insurance in force is $500,000, a policy of $5,000 may be accepted. If this sum should be larger than three times the average risk, it would be accepted as the maximum. If on the other hand the average risk when multiplied by three should exceed one per cent of the aggregate insurance in force, then that would be accepted as the maximum risk.

The association will be permitted to reinsure, that is, upon taking a risk, the association can, if it so desires, reinsure the risk or a part thereof, in some other company and can, if the associates so desire, accept insurance from other companies. Premiums are required to be paid in cash, and the corporation will be required to keep on hand in cash in an amount not less than twice the maximum of any one single risk and at no time less than $10,000.00 in cash. Also required to have on hand admitted assets at least two times any maximum risk assumed. In case of an organization of the mutual type you will be required to adopt by-laws not inconsistent with this act for your government. The by-laws shall provide for a cash premium. The corporation may limit the contingent liability of its members.

The cash premium above spoken of must be expressed in the policy. The corporation may limit the contingent liability of the policy holder to one premium or to any member above not exceeding ten. This contingent liability must be plainly expressed in the policy. Policy holders shall be members of the Association and may vote in person or by proxy.

We take it from reading the statute that it was intended to cover accidents to autos including theft, fire, property and collision and to afford cheap insurance. The company being mutual, the legislature has thrown certain guards about the plan and put certain limits upon the corporation. These are as to the admittance of the risks; limits the premiums the policy holders will be required to pay, requires certain amount of cash and admitted assets to be on deposit as a protection to the policy holder. All this must be done to the approval of the Auditor of the State. From the reading of the statute it appears that the State Auditor is to keep strict watch over the Association. Should it happen that the Corporation did not have on hands assets at least equal to the unearned premium reserve and other liabilities, the Corporation is required to assess its members liable to assessment in order to provide for such deficiency.

At the first of the opinion concerning Mutuals you recall that loss or damage by reason of bodily injury was excluded. There is a provision in this act under which such insurance may be made (in addition to collision, theft, fire and property discussed above).

To make such insurance, you will note the following:

It differs in that at no time does the statute speak of a $10,000.00 cash deposit. But, it shall hold admitted assets for each kind of insurance (fire, theft, property, collision and liability) equal to at least FIVE times the maximum single risk assumed. The maximum single risk shall not exceed 20 per cent of its admitted assets, or three times the average policy, or one per cent of insurance in force, which ever is the greater, simultaneous reinsurance being deducted in determining the maximum single risk. Otherwise, the provisions are similar.

As to the rights and liabilities of the insured and the insurer in case the insured or policy holder should fail to pay his premium when due, we wish to say that the legislative acts on which we gave our opinion are silent. We, therefore, have to go to the laws governing insurance in general on that proposition. We might say that all policies of insurance provide that in case the policy holder shall fail to pay his premium when due, that his insurance is forfeited and all his rights under the policy are at an end, except the privileges that are given the insured after lapse. The question of payment of the premiums is one of contract and the payment thereof may be made binding upon the insured or policy holder, but as stated above we feel safe in saying that it is the universal rule that where the insured or policy holder permits his premium to lapse, all his rights are forfeited. These provisions are embodied in the policy.

This is true in the case of Inter-Insurance, Mutual Insurance and Stock Insurance. Of course, the delinquent may be reinstated according to the Articles of Agreement or by-laws.

Then, too, in the case of Inter-Insurance in the Articles of Agreement, there is generally found a stipulation to this effect.

"The policy may be revoked or cancelled, by either the Company or the policy holder, by giving to the other ..... days notice in writing. In the event the Company makes the cancellation, it shall return the unearned premium; and in the event the policy holder makes the cancellation, there shall be returned ..... of the unearned premium."

Mutual Insurance is likewise a question of contract, and the by-laws may make a stipulation similar to the one suggested above.

It is to be noted and remembered, however, that the policy holder is liable for all assessments which are the result of any liability or accidents which occur prior to an effective cancellation of said policy.

EMISON & HOOVER.

Of the offers received from reciprocal organizations, that received from the Standard Auto Insurance Association was found to be the lowest and best offer. That offer is herewith submitted in full.

August 15, 1922.

Dr. James McCoy, Chairman,
Committee on Automobile Insurance,
State Medical Association,
Vincennes, Indiana.

Dear Doctor:

With regard to the automobile insurance of members of the Indiana State Medical Association, we hereby authorize you to present to the State Medical Association the following:

The Standard Auto Insurance Association by the Bainum-Phillippe Company, Attorney-in-Fact, agree to

insure the members of the Indiana State Medical Association for the period of one year, the said year to begin at any date fixed by the State Medical Association, on the following rates, to-wit:

INDIANA COUNTRY SCHEDULE

Class	List Price of Pleasure or Commercial Cars	Fire, Lightning and Wind-storm, per $100	Theft, per $100	$25 Deductible Collision	$50 Deductible Collision	$100 Deductible Collision	Full Coverage Collision	Public Liability	Property Damage $1 to $1000
1	Under $799	$ .60	$ .40	$12.00	$ 8.00	$ 6.00	$20.00	$10.00	$ 5.00
2	$ 800 to 1200	.60	.40	15.00	12.00	8.00	25.00	10.00	5.00
3	1300 to 1799	.60	.40	22.00	15.00	10.00	30.00	10.00	6.00
4	1800 to 2499	.60	.30	27.00	17.00	10.00	35.00	10.00	6.00
5	2500 to 3499	.50	.30	30.00	22.00	12.00	40.00	12.00	8.00
6	3500 to 4999	.50	.30	36.00	27.00	15.00	45.00	12.00	8.00
7	5000 Up	.50	.20	42.00	35.00	20.00	50.00	14.00	9.00
	LAKE AND MARION COUNTIES, INDIANA								
1	Under $799	$ .75	$2.50	$22.00	$12.00	$12.00	$30.00	$12.00	$ 8.00
2	$ 800 to 1299	.75	1.50	28.00	16.00	15.00	35.00	12.00	8.00
3	1300 to 1799	.75	1.25	36.00	20.00	20.00	42.00	15.00	9.00
4	1800 to 2499	.60	1.00	44.00	30.00	25.00	48.00	15.00	9.00
5	2500 to 3499	.50	.50	50.00	35.00	28.00	52.00	18.00	10.00
6	3500 to 4999	.50	.30	60.00	40.00	35.00	56.00	18.00	10.00
7	5000 Up	.50	.30	70.00	45.00	40.00	60.00	20.00	12.00
	INDIANA SCHEDULE, CITIES FROM 20,000 TO 100,000								
1	Under $799	$ .75	$ .75	$15.00	$12.00	$ 6.00	$25.00	$10.00	$ 5.00
2	$ 800 to 1299	.70	.50	20.00	16.00	8.00	30.00	10.00	5.00
3	1300 to 1799	.60	.50	25.00	20.00	10.00	35.00	10.00	6.00
4	1800 to 2499	.60	.40	30.00	24.00	12.00	40.00	10.00	6.00
5	2500 to 3499	.60	.40	40.00	28.00	12.00	45.00	12.00	8.00
6	3500 to 4999	.60	.40	45.00	32.00	15.00	50.00	12.00	8.00
7	5000 Up	.60	.30	50.00	42.00	20.00	55.00	14.00	9.00

It is understood and mutually agreed that the agents' premium or the membership fee is hereby cancelled on each of the said prospective policies and that the insurance shall be written for each member of the State Medical Association who requires it by means of his application through the Secretary of the County Medical Society in which he resides.

Yours very truly,

THE "STANDARD."
By H. M. ROBBINS.

HMR/AW

The Committee finds that the Standard Auto Insurance Association is a reciprocal concern, organized under the laws of Indiana, with the firm of Bainum-Phillippe Company as Attorney-in-Fact and that the said Bainum-Phillippe Company maintain the central office of this organization at Vincennes, Indiana. Your Committee then proceeded to make a thorough investigation of the financial standing of the Standard Auto Insurance Association. Being cognizant of the fact that the success of a reciprocal association depends largely upon the integrity, business ability and financial stability of the Attorney-in-Fact, a sworn statement was required and obtained from the offices of the Bainum-Phillippe Company, Attorney-in-Fact, setting forth the stockholders in full of the Bainum-Phillippe Company, which is herewith submitted.

August 16, 1922.

Ralph C. Phillippe, being duly sworn, states that the capital stock of the Bainum-Phillippe Company is held by the following persons, to-wit:

Herman Robbins ..... Vincennes, Indiana
Ralph C. Phillippe ..... Vincennes, Indiana
Max S. Kos ..... Vincennes, Indiana
Marion D. Gould ..... Vincennes, Indiana

He further states that the above named constitute the sole stockholders and that the Bainum-Phillippe Company is Attorney-in-Fact for The Standard Auto Insurance Association.

RALPH C. PHILLIPPE.

State of Indiana, County of Knox, ss:

Personally appeared before me, Ralph C. Phillippe and makes oath that the above is a true statement.

WALTER C. McFARLAND, Notary Public.

My commission expires January 16, 1925.

Your Committee then investigated the Bainum-Phillippe Company and find that the stockholders composing it are men of integrity, business ability and financial stability and have a reputation which is perfectly satisfactory wherever they are known.

Your Committee, therefore, recommends that the State Medical Association enter into an agreement with the Standard Auto Insurance Association to the effect that insurance shall be written by the Standard Auto Insurance Association on the automobiles of members of the State Medical Association for the year ending October 30, 1923, at the rates offered by the said Standard Auto Insurance Association. It is further recommended that a Committee be appointed by the State Medical Association for the ensuing year for the purpose of maintaining a connection between the State Medical Association and the Standard Auto Insurance Association and to continue during that year to have the subject of automobile insurance under consideration.

Respectfully submitted,
JAMES N. McCOY, Chairman
ROBLEY D. BLOUNT, Member
CHARLES S. BRYAN, Member

In the discussion which followed Dr. McCoy stated that the taking of this form of insurance (in case the motion carried) would be a purely voluntary act on the part of members of the Association—that there would be no obligation.

In answer to the question how these rates compare with those of the old line companies who issue automobile insurance, Dr. McCoy gave the following figures:

Essex touring car, value $1150.00, old line companies would insure at $950.00; premium $188.00 per year outside Marion County; $255.00 in Marion county. Standard Auto Insurance Company, under the above agreement, would insure at $1,000; premium $56.40 outside Marion county, $76.37 in Marion county.

Hudson car, value $1845.00, old line companies at 1500.00; premium $200.50 country schedule; $275.00 Marion county. Standard Auto Insurance Company, $77.50 and $96.00, respectively.

The full coverage cost of insurance (old line) on a Ford car is $132.20 on $400.00 valuation, outside Marion county; in Marion county, $175.00. Standard Auto Insurance Company, country schedule, $39.00; Marion county, $53.25.

Dr. McCoy's original motion, amended to read that a committee shall be appointed to obtain a liaison with the Standard Auto Insurance Company, was carried.

The president announced that the original committee would be continued.

Moved by Dr. J. N. McCoy that this report be published in full in THE JOURNAL. Motion seconded and carried.

Moved by Dr. George R. Daniels that the report of the Committee on Public Policy and Legislation, as printed in THE JOURNAL, be adopted. Motion seconded and carried.

The president announced that the American Medical Association is asking for the appointment of a committee by this Association to draft resolutions objecting to the training of World War veterans as chiropractors.

It was moved that such a committee be appointed. Motion seconded and carried. The president appointed the following committee, with instructions to report to the House of Delegates Friday morning: F. S. Crockett, Lafayette; P. B. Work, Elkhart; A. M. Mitchell, Terre Haute.

Dr. Edgar F. Kiser, Indianapolis, presented the following memorial to Dr. Albert C. Kimberlin, to Dr. Frank B. Wynn, and Dr. Edwin C. Walker:

RESOLUTION

As the mighty oaks tower above their brothers of the forest, so Albert C. Kimberlin, Frank B. Wynn and Edwin Walker stood preeminent among their fellows. Their lives ran along strikingly parallel lines. Men of humble parentage, their unusual ability and application raised them to the forefront of their profession, not alone within the borders of the State, but throughout the nation.

Modest in demeanor, of untiring zeal, courtly in manner, constantly extending a helping hand to the younger men in medicine, they were beloved of all who knew them. Not alone their confreres, but thousands whom they had befriended, hailed them as benefactors.

The demands upon their time in the practice of their chosen profession did not prevent them giving unusual attention to the pursuit of scientific investigation and research, and medicine has been greatly enriched by their contributions. Nor was medicine their only beneficiary. Our city and state have profited enormously by their activities in civic and communal work.

They were God-fearing men and have left to their families a heritage of which they may well be proud.

The Creator in His wisdom has seen fit to call to their eternal rest these, our esteemed colleagues. We who were proud to be their associates and friends thus give expression to our grief at the loss of these good men and extend to their families our profound and sincere sympathy.

BE IT RESOLVED, that this memorial be made a part of the minutes of the 1922 meeting of the House of Delegates of the Indiana State Medical Association, and that a copy be transmitted to the families.

EDGAR F. KISER,
C. H. McCASKEY,
G. B. JACKSON.

Moved that this memorial be adopted and spread upon the minutes. Motion seconded and carried.

The secretary then read the following communication from the Floyd County Medical Society regarding the Prohibition Law:

Whereas, the Prohibition Law as it at present exists, is unsatisfactory, creates a hardship and is a detriment to the sick and afflicted, and should be so modified and amended as to meet the requirements and conditions of those unfortunates:

Therefore, be it resolved, that the Floyd County, Indiana, Medical Society offer the following resolutions to our Congressmen and Senators.

1. That all Alcohol, Whiskies and Brandies for Scientific and Medical purposes, uses and requirements be put up in sealed containers, of one-half pint, one pint and quart containers for Medical use to the sick.

2. That Alcohol, Whiskies and Brandies be put under the Narcotic Law.

3. That regularly Licensed Druggists and Pharmacists procure it from the Distillers, on permit, in duplicate form Blanks, issued by the Government, the same as for Narcotics.

4. That he can only dispense it on prescriptions of regularly Licensed Physicians duly signed in form, in unbroken seal containers.

5. That only regularly Licensed, on Government permit, Physicians can prescribe alcoholics in unlimited quantity, as may be needed, in the physician's judgment, to meet the requirements and necessities of the patient.

6. That the penalty for the violation of the Alcoholic Act, be the same as for the violation of the Narcotic Act.

Be it further resolved, that a copy of these resolutions be sent to the Secretary of the Indiana State Medical Association, to be presented to the House of Delegates at the next Annual Meeting for consideration and action.

WM. C. WINSTANDLEY,
WM. L. STARR,
P. H. SCHOEN,
Committee.

Moved by Dr. George R. Daniels that this communication be received and placed on file. Motion seconded and carried.

Dr. E. M. Shanklin, chairman of the Medical Defense Committee, offered the following resolution, regarding a change in the By-Laws:

"RESOLVED: That Section 8 of Chapter XI be amended by adding after the word "constitution" in the 17th line, the following: 'nor in case of removal of a member from the State of Indiana'."

This was held over until Friday morning.

Dr. Alfred Henry of Indianapolis offered the following resolution:

"WHEREAS, the Indiana Tuberculosis Association is carrying on a campaign for a more intelligent appreciation of the medical problem, which is evidenced in its program for the prevention and control of tuberculosis, its health activities among children, the organization of county groups stimulating interest among laymen, the progress being made in bringing about the earlier diagnosis of tuberculosis, and increased facilities for the care of tuberculosis; therefore

BE IT RESOLVED, that the Indiana State Medical Association endorse the work of the Indiana Tuberculosis Association and urge the earnest support of the medical profession in furthering its endeavors."

Moved by Dr. George R. Daniels that this resolution be adopted. Motion seconded and carried.

Dr. C. S. Black of Warren, in behalf of the Howard County Medical Society, made the following motion:

"That Howard county be transferred from the Ninth to the Eleventh Councilor District."

Motion seconded and carried.

Dr. A. L. Marshall of Indianapolis, on behalf of the Indianapolis Medical Society, submitted the following resolution:

Whereas, your Committee recognizes the right of the State to supervise Medical education, to conserve the health and well-being of its citizens, and to that end has the privilege and duty of erecting and maintaining institutions for Medical education, for the care and treatment of its indigent population, and has the right and duty of fixing the standard for the proper performance of the Medical Practice Act, and,

Whereas, the State has the right and duty to conduct and maintain adequate State and County Health Boards, and in so far as it fulfills all these above indicated rights and duties, should have and does have the unqualified support of the Medical Profession in the fulfillment of these vested rights, which in no sense conflict with the principles hereinafter set forth, and,

Whereas, certain abuses of the above rights and duties, which abuses, if unchecked, will develop into State Medicine, a term which to most physicians and people, has meant everything and meant nothing, and which may be defined as the sum of a number of growing evil tendencies not commonly interpreted as having any part in Medical Socialism, and,

Whereas, the indicated abuses have been, and are still indulged in, and abetted by the State or its agents, we, therefore, offer the following resolutions as a platform of principles upon which the Indianapolis Medical Society should stand.

RESOLVED—

1. That while the Indianapolis Medical Society heartily supports the proposition that the State should care for its mental and moral defectives, and its indigent sick, it unqualifiedly condemns the tendency of the State to enter into competition with licensed physicians in the practice of Medicine and Surgery, and it condemns the maintenance of pay beds and wards in State Institutions or those partially subsidized by the State.

2. That it condemns the practice of appointing physicians to salaried and advertised positions and at the same time permitting these same salaried officials, free competitive rights against the profession to which

they belong, and declares that no person employed in any of its Medical Institutions, Hospitals, or Colleges, either in whole or in part supported by State funds, who occupies a position of trust or a chair of teaching in any department of Medicine or Surgery and who receives pay or salary for such employment, should be accorded the privilege of private medical or surgical practice, so long as such person is employed by the State and receives pay for services from any State funds of whatsoever character.

3. That it commends the establishment of free clinics for the treatment of tuberculosis, mental hygiene, venereal, and other diseases of the indigent sick, but for no other than the indigent.

4. That it endorses in public health administration, full time salaried officers who shall not, during their service, have the privilege of private practice, nor any right of supervising private practice.

5. That it upholds the standard and purpose of the State Medical Practice Act and insists that all persons engaged professionally, in the treatment of diseases, or the sick, whatsoever, of any description, shall be wholly subject to the same standard of educational qualifications and State examinations.

6. That while, at the present time, it recognizes the necessity of certain societies and industrial development to maintain adequate medical and surgical staffs, it deplores the growing tendency to widen the scope of contract and similar medical and surgical practice wherein the profession is not remunerated according to the usual competitive method and the patient not permitted to use his own selection of physicians.

7. That it condemns legislative enactments relative to all health matters, without the sanction and approval of the licensed and registered Medical Profession.

8. That it opposes lay and political domination of Medical and Surgical practice as opposed to sound public policy and to the scientific progress of medicine.

9. That, while it endorses the efforts of the agents of the Federal and State Governments in their desire to promote the health of the people, it condemns Federal supervision of State medical activities, masquerading under the guise of Federal aid or subsidy.

10. That it condemns the socialistic efforts of State, Federal, County or Municipal agents, to force the expense of private health upon the taxpayers, under the guise of Public Health.

11. That it condemns all "propaganda and elements at work" to create fictitious health problems, as attempts to socialize the Medical Profession, under the plea of "suffering humanity," whereby a great part of an independent people would be segregated into a pauperized class.

12. That it condemns the exploitation of special fields of medicine, surgery and obstetrics, by technicians, who are not qualified, licensed physicians.

Recognizing that the successful treatment of sick people depends upon personal and confidential relations between physician and patient, which relations are impossible under any of the indicated evils: and knowing humanity in its strength and in its weakness, in health and in disease, in wealth and in poverty, we, who dedicate our lives to the scientific investigation, prevention, and treatment of disease, with firm conviction in the ultimate wisdom of our course, offer these resolutions, and pledge our best efforts to uphold all true American ideals and principles.

Be it further resolved, that a true copy of these resolutions be immediately sent to the Secretary of each County Medical Society of the State of Indiana, to the Editor of the Indiana State Medical Journal, and to the Editor of the Journal of the American Medical Association.

Moved by Dr. Albert E. Bulson, Jr., that this resolution be referred to the Council with the request that its action be reported back to the House of Delegates. Motion seconded and carried.

Dr. George F. Keiper of Lafayette offered the following resolution:

"WHEREAS, the Indiana Workmen's Compensation Act provides that companies insuring contractors and concerns against liability for accidents to their employees shall pay for only sixty days of hospital care and professional services rendered the injured coming under the provisions of this Act; and

"WHEREAS, many cases of this nature cannot recover within the sixty-day period; therefore

"BE IT RESOLVED by the House of Delegates of the Indiana State Medical Association that an amendment to this Act to cover all treatment and care necessary in these cases be procured from the next session of the General Assembly, and that this task be committed to the Committee on Public Policy and Legislation."

Dr. Keiper moved the adoption of this resolution. Motion seconded and carried, and the resolution referred to the Committee on Public Policy and Legislation.

There being no further business to come before the House of Delegates, adjournment was taken to meet at eight o'clock Friday morning in the High Street Methodist Church.

SECOND MEETING

Pursuant to adjournment the House of Delegates convened at eight-ten, September 29th, in the High Street Methodist Church, the president, Dr. W. R. Davidson, presiding.

Roll-call of delegates.

The first order of business was election of officers, which resulted as follows: President, Charles H. Good, Huntington; first vice-president, Wilson T. Lawson, Danville; second vice-president, John H. Reed, Logansport; third vice-president, Charles S. Bryan, Vincennes; secretary-treasurer, Charles N. Combs, Terre Haute. Delegates to American Medical Association—J. R. Eastman, Indianapolis; alternate, M. R. Combs, Terre Haute. Committee on Administration and Medical Defense—David Ross, Indianapolis (to fill unexpired term of Dr. Frank B. Wynn); George R. Daniels, Marion (re-elected for ensuing three years). Committee on Hospital Standardization—E. J. Lent, South Bend (re-elected for ensuing five years).

Dr. F. S. Crockett, for his committee, made the following report:

"WHEREAS, it appears that a number of ex-service men from all parts of the country are being enrolled in schools for the training in Chiropractic with the sanction and approval of the United States Government as a proper vocational training for disabled ex-service men; therefore

"BE IT RESOLVED, that the House of Delegates of the Indiana State Medical Association, in annual session assembled, representing the legally qualified physicians of Indiana, of whom there are over 6,500, approves the sentiments expressed in the resolution adopted by the American Medical Association at its annual meeting at St. Louis in June, 1922, condemning this action by the Federal Government, and hereby directs that the proper officials of this Association memorialize and petition the Federal Government, and particularly the Director of the Veterans' Bureau and the Assistant Director in charge of the Rehabilitation Division of that Bureau, and each Senator and Representative from this State, and to take such other action in the interest of the welfare of all the people, and also for the protection of those who honestly desire to administer to the sick, to the end that the ex-soldiers seeking vocational training which will fit them for ministering to the sick and aiding in the recognition, control and prevention of disease, shall be sent to schools equipped to give adequate training and which at least meet the requirements of the American Medical Association for Class "A" Medical schools.

F. S. CROCKETT, Chairman."

Moved that this resolution be adopted. Motion seconded and carried.

The president announced the following ruling—that in the case of the death of a Councilor during the year, the president of the District Society shall have power to appoint a successor for the unexpired term. (Taken by consent.)

Dr. Frank W. Black of Ligonier brought up the matter of medical inspection in schools, and in connection therewith read the state law (which follows), the last clause of which should be amended:

"Sec. 5, page 340, Acts 1921: The school superintendent of any attendance district may make or have made an examination of any or all children between the ages of seven and sixteen years and may exclude or excuse from school any child found mentally or physically unfit for school attendance, provided such exclusion or excuse is approved and certified to by a physician in good standing, and providing further that such exclusion or excuse shall be valid for not longer than the school year during which it is issued.

PROVIDED that no pupil or minor shall be compelled to submit to medical examination or treatment under authority of this section whose parent or

guardian objects to the same. Such objection shall be made by written and signed statement delivered to the pupil's teacher or to any person who might conduct such examination or treatment in the absence of such objection."

Moved that this matter be referred to the Committee on Public Policy and Legislation. Motion seconded and carried.

Dr. Albert E. Bulson, Jr., read the following report of the Council, regarding the resolution of Dr. Marshall:

"House of Delegates,
Indiana State Medical Association.
Gentlemen:

Your Council desires to make the following report concerning the resolution referred by you for consideration:

With the exception of the first two paragraphs, the Council approves and heartily endorses the resolution.

Concerning the first two paragraphs, which concern the management and policies of hospitals, medical schools and other institutions under State control, your Council believes that the subject deserves further study and investigation before this Association passes judgment upon the matters considered.

Realizing the fact that the medical department of the Indiana State University, and the hospitals and other institutions directly or indirectly connected therewith, should have the cordial support of this Association and each and every individual member thereof, and realizing that the rank and file of the membership of this Association may not be acquainted with the policies of such institutions and therefore are not giving such enterprises the endorsement and support that they desire, the Council begs leave to recommend that the President of this Association appoint a committee of three and not more than five members of the Association, to meet the Trustees of Indiana University and officers of the medical department of the University and hospitals connected therewith, for the purpose of obtaining full and detailed information concerning the management and policies of such enterprises, such information to be embodied in a report to be printed at once in the JOURNAL of this Association, to the end that the representative medical men of the State forming this Association may have a more accurate idea of the functions and policies of those institutions and the manner of their management.

Your Council makes this recommendation solely with the view of bringing about a better understanding between the medical profession of the State and the medical department of Indiana University, and with the hope that the conference suggested will result in mutual advantage and the encouragement of co-operation and harmony in promoting the interests of both.

Your Council further recommends that the actual expenses of such a committee as recommended shall be borne by this Association.

Furthermore, pending the report of the committee, your Council recommends that the resolutions sent for consideration be laid upon the table for further action.

Respectfully submitted,
ALBERT E. BULSON, JR.,
J. H. WEINSTEIN,
S. E. EARP,
Committee of the Council."

Moved by Dr. A. M. Hayden that this report be adopted. Motion seconded and carried.

The president announced that this committee would be appointed within a day or two.

Dr. A. H. Rhodes presented the following suggested amendment to Paragraph 8423, Burns' Revised Statutes of 1914:

"In addition to the penalties herein provided, the judges of the various Circuit Courts in this State shall have the power, and it is made their duty, to grant restraining orders and injunctions against any person practicing medicine, as herein defined, until such time as such person shall have obtained the license so to practice in the manner and in the form as herein provided; and such judges shall have all powers in such connection as they may have in issuing other injunctions."

This was referred to the Committee on Public Policy and Legislation with the recommendation that it be presented to the next session of the Legislature.

Dr. W. R. Davidson, president, took the floor to speak on the idea of engaging a field secretary who would give his entire time to speaking before lay audiences throughout the state.

Dr. J. A. MacDonald moved that the Chair appoint a committee of three to arrange for the selection of an Educational Secretary, whose duties and salary would be defined by the Council.

Motion seconded by Dr. Alfred Henry and carried.

Dr. F. W. Cregor was allowed the privilege of the floor in order to speak in favor of the appointment of Dr. J. N. Hurty of Indianapolis, retiring State Health Commissioner, to the position of Educational Secretary.

The House of Delegates, having thus created the Committee on Public Education, the president announced the personnel of that committee as follows: W. N. Wishard, Indianapolis; David Ross, Indianapolis; F. W. Cregor, Indianapolis.

Dr. J. A. Craig of Greenwood moved the appointment of a committee of from three to five, to which shall be referred the matter of investigating the feasibility of reorganizing the Indiana State Medical Association so as to increase the size of the constituent units, said committee to report to the next annual session. Motion seconded by Dr. George D. Miller of Logansport, and carried.

Dr. George T. McCoy of Columbus, speaking on the subject of the difficulty of maintaining societies in the smaller counties, cited the example of his own county in obviating the existing difficulties. He said that Bartholomew county had an unwritten agreement with the counties of Jackson and Jennings whereby joint meetings of the three societies were held, first in one of the counties and then another. This arrangement increased the interest as well as the attendance at the meetings and yet enabled the physicians in each county to meet once a month.

Following this a discussion ensued, led by Drs. Harry Knott of Plymouth, O. T. Brazelton of Princeton, and J. N. McCoy of Vincennes, concerning the chiropractic question.

No further business presenting, the meeting adjourned. CHARLES N. COMBS, *Secretary*.

GENERAL MEETINGS

FIRST MEETING

The first General Meeting was held in the High School Auditorium, Muncie, Indiana, September 28, 1922, being called to order at nine-fifteen a. m. by the president, Dr. William R. Davidson, Evansville, Indiana. The president announced that the address of welcome by the mayor of Muncie had been printed in the Muncie *Dynamo*, in order that it might have a wider circulation.

The president read his address, entitled "The Status of the Profession in Indiana".

On motion, duly seconded, Dr. J. E. Rush, of New York City, was permitted to speak for ten minutes on behalf of the American Society for the Control of Cancer.

Dr. George W. McCaskey, Fort Wayne, Indiana, read a paper entitled "The Medical Phase of Endocrinology".

Dr. C. C. Bitler, Newcastle, read a paper entitled "The Neurological Phase of Endocrinology".

Dr. W. D. Gatch, Indianapolis, read a paper entitled "The Surgical Phase of Endocrinology".

The above symposium was discussed by Drs. Edgar F. Kiser, Indianapolis; Albert E. Sterne, Indianapolis; Charles P. Emerson, Indianapolis; Tom Jones, Anderson; C. H. Good, Huntington; George W. Spohn, Elkhart; C. S. Bond, Richmond; George F. Keiper, Lafayette; Charles Stoltz, South Bend; J. R. Eastman, Indianapolis; Charles A. Sellers, Hartford City; Grace L. Homan, Laporte; and the discussion closed by Drs. George W. McCaskey, C. C. Bitler and W. D. Gatch.

Adjourned.

SECOND MEETING

The last General Meeting convened at two o'clock p. m. September 29th. the newly-elected president, Dr. C. H. Good, of Huntington, presiding.

Dr. Charles F. Neu. Indianapolis, read a paper entitled "Meningitis: Differential Diagnosis".

Dr. Miles F. Porter, Jr., Fort Wayne, read a paper entitled "Meningitis: Treatment".

Dr. Harry Boyd-Snee, South Bend, read a paper entitled "Otitic Meningitis".

The above symposium was discussed by Drs. Robert M. Moore, Indianapolis; D. O. Kearby, Indianapolis; C. Norman Howard, Warsaw; C. H. McCaskey, Indianapolis; Charles G. Beall, Fort Wayne; Charles A. Sellers, Hartford City; and the discussion closed by Drs. Charles F. Neu, Miles F. Porter, Jr., and Harry Boyd-Snee.

The president, Dr. C. H. Good, expressed to the physicians of Muncie the appreciation of the State Medical Association for the very satisfactory way in which they had taken care of the meeting, both from a social and scientific standpoint.

The meeting adjourned *sine die*.

SECTION ON SURGERY

FIRST MEETING

The Section on Surgery met in the High School Auditorium, the first meeting called to order at two p. m. September 28th, by the chairman, Dr. A. S. Jaeger, of Indianapolis.

Dr. Charles H. Frazier, Philadelphia, delivered the address in surgery, entitled "The Trend of Neurological Surgery".

A rising vote of thanks was tendered Dr. Frazier for his splendid address.

Dr. J. Rilus Eastman, Indianapolis, read a paper entitled "A Safe Method for Drainage of Intra-Abdominal Abscesses". This paper was discussed by Drs. Miles F. Porter, Sr., Fort Wayne; Harry G. Gradle, Kokomo; Walter U. Kennedy, Newcastle, and the discussion closed by Dr. J. Rilus Eastman.

Dr. A. C. Roope, Columbus, read a paper entitled "Thyroid Disease". This paper was discussed by Drs. F. H. Jett, Terre Haute; W. E. Klingler, Garrett, and the discussion closed by Dr. A. C. Roope.

Dr. Frank W. Foxworthy, Indianapolis, read a paper entitled "Diagnosis of Duodenal Ulcer". This paper was discussed by Drs. W. H. Foreman, Indianapolis; Miles F. Porter, Sr., Fort Wayne; H. O. Pantzer, Indianapolis; A. M. Hayden, Evansville; A. B. Graham. Indianapolis; H. H. Wheeler, Indianapolis; Albert M. Cole, Indianapolis; Thomas B. Noble, Indianapolis; C. F. Voyles, Indianapolis, and the discussion closed by Dr. Frank W. Foxworthy.

Dr. F. C. Walker, Indianapolis, read a paper entitled "Reconstruction of Perineal Genito-Urinary Childbirth Injuries". This paper was discussed by Drs. A. A. Rang, Washington; J. H. Weinstein, Terre Haute; G. D. Marshall, Kokomo; Charles J. Rothschild, Fort Wayne; G. B. Jackson, Indianapolis; Walter U. Kennedy. Newcastle; and the discussion closed by Dr. F. C. Walker.

Dr. E. E. Padgett, Indianapolis, read a paper entitled "Tuberculosis of the Female Generative Organs". This paper was discussed by Drs. Carl Habich, Indianapolis; G. B. Jackson, Indianapolis; James S. Shaffer, Terre Haute; P. C. McCown, Indianapolis; Karl R. Ruddell, Indianapolis; and the discussion closed by Dr. E. E. Padgett.

Adjourned.

SECOND MEETING

Pursuant to adjournment the Section on Surgery reconvened at nine-fifteen a. m. September 29th, with the vice-chairman, Dr. T. C. Kennedy of Indianapolis, presiding.

The first order was election of officers, which resulted as follows: Chairman, A. P. Roope, Columbus; vice-chairman, G. B. Jackson, Indianapolis; secretary, Merrill S. Davis, Marion.

Dr. A. M. Mendenhall, Indianapolis, read a paper entitled "Occiput Posterior Positions: Early Diagnosis and Various Methods of Treatment". This paper was discussed by Drs. Clay Ball, Muncie; G. B. Jackson, Indianapolis; Homer Wollery, Bloomington; Charles J. Rothschild, Fort Wayne; Herbert D. Fair, Muncie; and the discussion closed by Dr. A. M. Mendenhall.

Dr. H. A. Duemling, Fort Wayne, read a paper entitled "Technique of Cholestectomy". There was no discussion of this paper.

Dr. Simon J. Young, Gary, read a paper entitled "Some Observations on Gall Bladder Surgery". This paper was discussed by Drs. E. S. Jones. Hammond; G. G. Eckhart, Marion; John H. Eberwein, Indianapolis; W. E. Klingler, Garrett; H. A. Duemling, Fort Wayne; Walter H. Williams, Lebanon; M. A. Austin, Anderson; and the discussion closed by Dr. Simon J. Young.

Dr. M. A. Austin, Anderson, read a paper entitled "Repair of Three Uncommon Fracture Cases, with the Use of an Original Crucifixion Splint in Fracture of the Surgical Neck of the Humerus". This paper was discussed by Drs. E. H. Clauser, Muncie; H. R. Allen, Indianapolis; G. D. Marshall, Kokomo; C. C. Cotton, Elwood; and the discussion closed by Dr. M. A. Austin.

Dr. G. D. Marshall, Kokomo, read a paper entitled "Diseases and Injury to the Hip Joint". This paper was discussed by Drs. C. C. Terry, South Bend; H. R. Allen, Indianapolis, and the discussion closed by Dr. G. D. Marshall.

Dr. H. R. Allen, Indianapolis, read a paper entitled "The Surgical Engineer". This paper was discussed by Drs. Louis D. Belden, Indianapolis; Walter H. Williams, Lebanon; William S. Ehrich, Evansville; M. A. Austin, Anderson; G. D. Marshall, Kokomo; and the discussion closed by Dr. H. R. Allen.

Adjourned.

SECTION ON MEDICINE

FIRST MEETING

The first meeting of the Section on Medicine of the Indiana State Medical Association was called to order in the Hotel Roberts, Muncie, at 2:30 p. m. Thursday, September 28, 1922, by the chairman, Dr. George C. Richardson, Van Buren.

Dr. T. F. Bowles moved that a committee of three be appointed to draft resolutions on the death of Dr. Kimberlin, Dr. Wynn and Dr. Walker. Motion seconded and carried.

The chairman appointed a committee for this purpose consisting of Drs. Charles Good, Huntington; W. A. Fankboner, Marion, and Dr. Frank.

Dr. E. F. Kiser stated that he was heartily in favor of the motion but that a similar motion had been passed by the House of Delegates, and on motion duly seconded and carried Dr. Kiser read the resolutions that had been drafted by that committee.

Dr. Chas. P. Emerson moved that the committee from the Section on Medicine recognize these resolutions. Seconded and carried.

Dr. John H. Warvel, Indianapolis, presented a paper on "Some Observations on Cases Showing a Disturbance of Carbohydrate Metabolism".

This paper was discussed by Drs. B. M. Edlavitch, Fort Wayne; C. R. Strickland, Indianapolis; T. F. Bowles, Muncie; Allen Hamilton, Fort Wayne; C. A. Sellers, Hartford City; J. A. MacDonald, Indianapolis; C. F. Voyles, Indianapolis; and the discussion closed by Dr. Warvel.

Dr. O. G. Pfaff, Indianapolis, read a paper on "Congenital Pyloric Stenosis".

This paper was discussed by Drs. James C. Carter,

Indianapolis; W. D. Gatch, Indianapolis; Louis H. Segar, Indianapolis; and the discussion closed by Dr. Pfaff.

Dr. Charles Good reported that the committee to consider resolutions on the death of Drs. Kimberlin, Wynn and Walker had accepted the resolutions passed by the House of Delegates, but would like to send a copy to the families of the deceased suitably inscribed and placed in a dark green cover, green being symbolic of memory.

Dr. Alfred Henry moved that the report of the committee be accepted. Seconded and carried.

Dr. Alfred Henry presented a paper on "The Treatment of Pulmonary Tuberculosis".

This paper was discussed by Drs. G. C. Johnson, Evansville; Charles R. Bird, Greensburg; W. A. Evans, Chicago; John N. Hurty, Indianapolis; T. F. Bowles, Muncie; Chas. P. Emerson, Indianapolis; Geo. F. Beasley, Lafayette; Chas. S. Bond, Richmond; and the discussion closed by Dr. Henry.

Owing to the lateness of the hour it was moved and seconded that the paper of Dr. J. E. Luzadder be postponed until the morning session.

Adjournment at 5:45 p. m. to reconvene at 8:30 a. m. Friday, September 29.

SECOND MEETING

The second meeting of the Section on Medicine was called to order at 9:00 a. m. Friday, September 29, 1922, by the chairman, Dr. George C. Richardson, Van Buren.

Dr. J. E. Luzadder, Bloomington, read a paper on "The Therapy of Syphilis".

This paper was discussed by Drs. Chas. P. Emerson, Indianapolis, and Wm. S. Ehrich, Evansville.

At this point the vice-chairman, Dr. R. H. Beeson, Muncie, took the chair.

Dr. James Wynn, Indianapolis, presented a paper entitled "Sensitivity to Epidermal and Pollen Proteins; Diagnosis and Treatment".

This paper was discussed by Drs. C. G. Beall, Fort Wayne; Charles S. Bosenbury, South Bend; Oscar T. Scamahorn, Pittsboro; B. M. Edlavitch, Fort Wayne; David L. Kahn, Indianapolis; and the discussion was closed by Dr. Wynn.

Dr. Charles Louis Mix, Chicago, delivered the address in medicine entitled "Biliary Tract Infection and Its Differentiation from Ulcer". (No discussion.)

Dr. S. C. Waters, Middletown, presented a paper on "Epidemic Jaundice".

This contribution was discussed by Drs. W. M. Stout, Newcastle; Will P. Shimer, Indianapolis; W. A. Fankboner, Marion; W. W. Wadsworth, Muncie; C. A. Sellers, Hartford City; and the discussion was closed by Dr. Waters.

The chairman now resumed the chair.

Dr. W. A. Fankboner asked the consent of the Section and his discussants to have his paper read by title only and published in THE JOURNAL. On motion duly seconded and carried this consent was granted.

At the suggestion of the chairman a vote of thanks was tendered by the Section to the Muncie Academy of Medicine, the local profession and the management of the Hotel Roberts for their hospitality and efforts for the success of the meetings.

The following gentlemen were elected as Section officers for the ensuing year: Chairman, Dr. B. R. Kirklin, Muncie; vice-chairman, Dr. W. A. Fankboner, Marion; secretary, Dr. C. G. Beall, Fort Wayne.

Dr. Richardson introduced the newly elected chairman to the Section and announced that this was thought to be the largest meeting ever held by the Indiana State Medical Association, as there were approximately six hundred physicians in attendance. He also announced that Terre Haute had been selected as the meeting place for 1923.

The chairman then introduced the newly elected President of the Association, Dr. Charles Good, to the Section and Dr. Good responded with a few remarks.

As this completed the program, on motion duly seconded and carried, the Section on Medicine adjourned at 12:40 *sine die*.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

FIRST MEETING

The Section met in the Grill Room of the Roberts Hotel Thursday afternoon, September 28th, and was called to order at 2 p. m. by the chairman, Dr. C. H. McCaskey, who delivered an address. He selected for his subject "A Brief Review of Otology to the Beginning of the Nineteenth Century".

Dr. William B. Chamberlain, Cleveland, Ohio, read a paper (by invitation) entitled "Endonasal Operations on the Lachrymal Sac", which was discussed by Drs. G. W. Spohn, Elkhart; C. H. McCaskey, Indianapolis; Harry Boyd-Snee, South Bend; C. Norman Howard, Warsaw; Albert E. Bulson, Jr., Fort Wayne; C. J. Adams, Kokomo, after which the discussion was closed by the essayist.

Dr. Albert E. Bulson, Jr., Fort Wayne, read a paper entitled "Cycloplegics in Refraction Work".

This paper was discussed by Drs. A. L. Marshall, Indianapolis; R. W. Cochran, Madison; George F. Keiper, Lafayette; W. A. Hollis, Hartford City; O. G. Brubaker, North Manchester; Don L. Miller, Indianapolis, and in closing by the essayist.

Dr. F. S. Cuthbert, Kokomo, read a paper entitled "System and Thoroughness in Eye Examinations and Treatment", which was discussed by Drs. W. A. Hollis, Hartford City; G. W. Spohn, Elkhart; George F. Keiper, Lafayette, and Albert E. Bulson, Jr., Fort Wayne, after which the discussion was closed by the author of the paper.

On motion, the Section adjourned until 9 a. m. Friday, September 29.

SECOND MEETING

The Section met at 9 a. m. Friday, September 29, and was called to order by the chairman.

The following officers were nominated and elected: Chairman, Dr. C. J. Adams, Kokomo; vice-chairman, Dr. Harry Boyd-Snee, South Bend; secretary, Dr. E. M. Shanklin, Hammond, re-elected.

Dr. W. F. Hughes, Indianapolis, read a paper entitled "Cataract Extraction and Its Complications".

This paper was discussed by Drs. Frank A. Morrison, Indianapolis; G. W. Spohn, Elkhart; W. A. Hollis, Hartford City; B. W. Egan, Logansport; C. J. Adams, Kokomo; O. G. Brubaker, North Manchester, and in closing by the essayist.

Dr. W. S. Tomlin and Dr. D. S. Adams, Indianapolis, contributed a joint paper entitled "Phases of Chronic Laryngeal Infection", which was discussed by Drs. K. T. Brown, Muncie; G. W. Spohn, Elkhart; D. O. Kearby, Indianapolis; C. Norman Howard, Warsaw; Harry A. Van Osdol, Indianapolis; W. A. Hollis, Hartford City; Carl H. McCaskey, Indianapolis, after which the discussion was closed by Dr. Tomlin.

Dr. G. W. Spohn, Elkhart, read a paper on "Eye Drainage".

This paper was discussed by Drs. C. Norman Howard, Warsaw; D. O. Kearby, Indianapolis; W. F. Hughes, Indianapolis; Albert E. Bulson, Jr., Fort Wayne; Harry Boyd-Snee, South Bend, and in closing by the essayist.

As there was no further business, scientific or otherwise, to come before the Section, the meeting adjourned *sine die*.

THIRTEENTH DISTRICT MEDICAL SOCIETY

The 34th meeting of the Thirteenth District Medical Society was called to order by President B. F. Overmyer, at 1:30 p. m. September 1, in the pavilion of the Lakeview Hotel, Lake Manitou, Rochester, Indiana.

The minutes of the preceding meeting were read and approved. The treasurer's report was read and referred to the auditing committee, Drs. Charles Stoltz, Harry Knott and C. S. Campbell, who later reported it correct and on their recommendation it was accepted by vote of the society.

The nominating committee, Drs. C. E. Reed, E. O. Kreuger and G. W. Thompson, submitted the following ticket: For president, H. O. Shafer, Rochester; vice-president, J. N. Kelly, Westville; secretary-treasurer, James A. Work, Jr., Elkhart; councilor, C. Norman Howard, Warsaw. These candidates were elected by unanimous vote of the society.

The resolutions committee, Drs. J. B. Berteling, C. C. Terry and F. P. Eastman, presented the following resolutions on the death of Dr. Enos Musser Hoover:

WHEREAS, It has pleased Almighty God in His infinite wisdom and justice to call to his eternal home His servant, Dr. Enos M. Hoover,

THEREFORE, BE IT RESOLVED, That the untimely death of Dr. Hoover has been a loss to the medical profession because of his high medical standard, to his fellow citizens because of his sterling integrity, to his community at large because of his many philanthropic services, especially as member of the Anti-Tuberculosis Society and as president of the Child's Welfare League.

BE IT FURTHER RESOLVED, That the 13th District Medical Society extend to the family of the deceased and to his fellow citizens its profound sympathy and condolences.

BE IT FURTHER RESOLVED, That a copy of these resolutions be sent to the family of the deceased, to the press of Elkhart and Goshen and that the same be spread on the records of this, the 13th District Medical Society of the State of Indiana.

C. C. TERRY,
F. M. EASTMAN,
J. B. BERTELING,
Committee.

Rochester, Indiana, September 1, 1922.

The resolutions were accepted by vote of the society. The secretary sent copies to Mrs. Hoover and to press as instructed.

The invitation of the Marshall County Medical Society to hold the next annual meeting in Plymouth, made through Dr. Harry Knott, was accepted by unanimous vote of the society.

The report of the Committee on Constitution and By-Laws by Dr. C. N. Howard, chairman, was to the effect that the committee considered that no revision was necessary. Accepted by consent.

All committees were duly appointed by the president.

The following program was given: (1) "The Surgical Measures Employed for the Relief of Gastric and Duodenal Ulcers" (illustrated by lantern slides and operations on the dog)—E. A. Printy, Chicago. (2) "When Are Gastric and Duodenal Ulcer Cases Medical and When Surgical?"—B. F. Kuhn, Elkhart. Discussion: C. C. Terry, South Bend; Charles Stoltz, South Bend, and B. F. Kuhn, closing. (3) "Prenatal Care of the Mother"—C. L. Slonaker, Culver. Discussion: J. N. Kelly, Westville; E. O. Kreuger, Michigan City; C. G. Mackey, Culver; Charles Stoltz, South Bend; F. R. Clapp, South Bend, and C. L. Slonaker, closing. (4) "Obscure Headaches of Nasal Origin"—R. A. Barlow, South Bend. Discussion: J. B. Porter, Elkhart; C. N. Howard, Warsaw, and R. A. Barlow, closing. (5) In the absence of Dr. C. C. Dubois, Warsaw, who was ill, Dr. Wm. Kelsey, Monterey, presented a few remarks on the treatment of diphtheria. Dr. Kelsey, aged 87, who has been practicing medicine 67 years, is the senior member of the society.

After an enjoyable hour spent in bathing in Lake Manitou and in visiting, the members banqueted at 6:30 at the Country Club. The after-dinner address was given by Dr. Vernon C. David, Chicago, on the subject, "Consideration of the Pathology and Therapy of a Few Rectal Lesions." Dr. David's paper was illustrated by lantern slides.

During the forenoon the golf-playing portion of the membership indulged in a variety of brands of that famous game commensurate with the number playing. So far as the secretary was able to determine the honors were impartially divided.

This meeting was the largest in the history of the society, having been attended by 86 members and visitors.

Adjournment.

JAMES A. WORK, JR.,
Secretary.

CORRESPONDENCE

Muncie, Ind., September 5, 1922.

EDITOR THE JOURNAL:

Several of my medical friends throughout the state have copies of my *Medical History* which were left with them for sale. Please say to these parties that I would be glad to have them return to me at my expense to Muncie, Indiana, any unsold copies.

Respectfully,
G. W. H. KEMPER.

TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

ETO-SO-ERC:—A circular letter, signed T. M. Berry, M.D., New Orleans, recommends the intravenous use of "Eto-So-Erc" ("Creosote" spelled backward) in the treatment of pulmonary tuberculosis, influenza, pneumonia, bronchitis and pulmonary gangrene. Eto-So-Erc is stated to be a "highly purified form of Beechwood Creosote, especially prepared for intravenous administration". It is asserted that "it comes in direct contact and becomes fixed to the pathologic tissue and bacteria". Creosote is credited with being of some value in tuberculous infections when taken orally. It is most probable that any benefits derived from the administration of creosote are due to the local effect on the alimentary canal, on the bronchitis and to the antipyretic action; hence, the benefits would not be obtained from its intravenous injection. The argument is advanced for Eto-So-Erc that, in respiratory infections, tubercle bacilli are destroyed by blood containing small amounts of creosote. This assertion is misleading because the tubercle bacilli in the lungs are embedded in the tissues and, therefore, are inaccessible to the creosote said to be contained in Eto-So-Erc. To give creosote, a readily absorbed drug, intravenously is irrational and unscientific.—(*Jour. A. M. A.*, Aug. 5, 1922, p. 492).

ZINC STEARATE DUSTING POWDERS.—Untoward effects from the accidental aspiration of zinc stearate dusting powder by infants are reported. In some cases, bronchopneumonia, of a more or less fulminating type, has ensued. In other infants, an acute toxemia was the most conspicuous symptom. The zinc stearate container, with its large perforations, as now prepared for the nursery, appears to be a distinct menace to the health of infants.—(*Jour. A. M. A.*, Aug. 19, 1922, p. 663).

THE "NATURAL HEALTH SCHOOL" seems to be the latest creation of Milo Erskine Yergin and Mr. [illegible]

In 1920, Yergin was president of the "Co-operative Food Company". This concern advertised "Dr. Yergin's Pus and Pain Chart". The chart sold for $10 and was advertised with the claim that it would enable one, "with the simple foods of nature", to control and obliterate completely, in from fifteen minutes to fifteen hours, any kind of pain and all pus conditions. The use of the chart required "Sea Food Baths", "Earth Food Table Salt". "Food Iodine", "Cinnamon Food Oil", "Myrrh Compound", and "Cold Food". All were for sale by the Co-operative Food Company at prices ranging from 25 cents to $3 a package. The Natural Health School seems to combine a strong mixture of religious fanaticism with the practice of the healing art.

Yergin put forward a "True Musical Therapy" whereby, with the aid of a piano "thoroughly in tune and having high quality strings", it is possible to produce vibration rates corresponding to chemical elements! It is asserted that if the keys corresponding to mercury and chlorine are struck, a sensitive person will respond with a flow of saliva in the mouth. If the keys are kept sounding for a few moments, a bowel action will be started. The possibilities in treating stomachache, soft corns, psoriasis or smallpox by playing the piano seem unlimited. The preposterous nonsense promulgated by Yergin is, apparently, accepted at its face value by many laymen and not a few so-called "drugless practitioners". The harm that men of this type can do is realized when one reads of persons who are "treating" sufferers from tuberculosis, cancer and equally serious conditions by the fantastic principles laid down by Yergin, and by the nostrums sold by him.—(*Jour. A. M. A.*, Aug. 26, 1922, p. 757).

HELIOTHERAPY.—The action of far ultraviolet light on normal tissue and the action of near ultraviolet light under certain pathologic conditions have been investigated enough to show that there are well defined effects due to light, closely related to the physiologic results of exposure to radium and the roentgen rays. Recently, Kramer, Casparis and Howland have again demonstrated the healing of the rachitic process in the bones of rachitic children through systematic exposure to the rays from the mercury vapor quartz lamp. The healing of the bones occurred at about the same time that it does after the administration of cod liver oil. The work of Finsen in the treatment of *lupus vulgaris* emphasizes the importance of considering a diversity of forms of radiant energy in skin affections. In tuberculosis, especially surgical tuberculosis, heliotherapy has long had advocates. Light of short wave length, which is known to have marked bactericidal effects, may not be without salutary influence in the treatment of wounds. Artificial lights, if glass covered, are therefore harmless and therapeutically weak. Sunlight rarely contains enough far ultraviolet rays to produce injury. Consequently, heliotherapy that demands highly potent effects must look to artificial sources of radiation. The quartz mercury arc and bare metallic arcs are known to belong in the potent class, and, it is to be remembered, may be extremely injurious, so that the eyes should be protected from them.—(*Jour. A. M. A.*, Sept. 2, 1922, p. 827.)

INTRAVENOUS MEDICATION.—There are serious limitations to intravenous medication which are likely to be forgotten or overlooked in the enthusiasm for a promising procedure. They involve both disappointments and dangers. These were reviewed by Carl Voegtlin before the Section on Pharmacology and Therapeutics at the St. Louis session of the American Medical Association. Not the least in importance are the difficulties of technic which form a stumbling block for all too many physicians. Voegtlin pointed out that the chemical composition of the blood and its physicochemical properties, such as osmotic pressure, hydrogen-ion concentration and colloidal state, are maintained with remarkable constancy and appear to be essential to physiologic well-being. A sudden change in reaction, the production of precipitates and subsequent thrombosis in vital organs, the overwhelming of sensitive tissues, such as the cardiac and nervous structures, with high concentration of potent drugs, are a few illustrations of the untoward possibilities in a procedure that often means "more haste and less speed".—(*Jour. A. M. A.*, Sept. 2, 1922, p. 828.)

LEACH CANCER CURE.—The Indianapolis Cancer Hospital is conducted by C. C. Root and C. A. McNeill. This was formerly called the "Parkview Sanatorium" and later the "Leach Sanatorium". This business was started by Leon T. Leach, mainly as a mail-order "cure" for cancer. When Leach's business was declared a fraud and debarred from the mails, the name was changed to "Leach Sanatorium". Later the name was changed to its present style and McNeill became president and Charles C. Root treasurer. As the list of those claimed to have been successfully treated by Root and McNeill appeared in Leach's old testimonials, one is justified in assuming that Root and McNeill use the Leach Method. At the time the federal authorities interfered with Leach's business, an analysis was made by the government chemists of the "cure". In effect, the report was:

"'CANCEROL BLOOD RENOVATOR'.—This preparation was labeled in part: 'A compound of Essential Oils for the treatment of Malignant Diseases. Predigested Oils for internal administration.' The federal chemists reported that the stuff contained 10 percent of alcohol, a little more than 16 percent of total solids, almost wholly sugars, no alkaloids and no oils. It had an odor resembling sarsaparilla and senega. It was not a 'compound of essential oils', neither were there any 'predigested oils' present.

"'Cancerol'.—This was nothing but cottonseed oil.

"'Special Germ Killer and Disinfectant'.—This was a disinfectant of the creosol type and was to be used by diluting one teaspoonful in three pints of hot water. Bacteriologic tests showed that the solution, when diluted as prescribed, has little if any germicidal value.

"Pills.—These were colored red and sugar-coated; they were found to consist essentially of baking soda, iron (ferrous) sulphate, a small amount of red pepper and glucose.

"The above comprised the 'treatment' for 'internal' cancer; for 'external' cancer the victims received the Cancerol Blood Renovator and the Pills as described above and, in addition:

"'Night Oil'.—This, like 'Cancerol', was found to be a small bottle of cottonseed oil.

"'Day Oil'.—This was a half-ounce bottle of ichthyol.

"'Prescription 16'.—Found to be an alcoholic preparation containing opium.

"'Healing Salve'.—This, according to the federal chemists, was vaseline in which were incorporated boracic acid and bismuth salts.

"'De Vit-Ol'.—This was a caustic paste—invariably used by the 'cancer cure' quacks—and contained 34 percent of arsenic."

FLUMEBIN.—The Council on Pharmacy and Chemistry has published a preliminary report of Flumerin, the disodium salt of hydroxymercurifluorescein. A report on "Flumerin—A New Mercurial for the Intravenous Treatment of Syphilis"—was read before the Section on Dermatology at the 1922 meeting of the American Medical Association by Edwin C. White,

J. H. Hill, Joseph E. Moore and Hugh H. Young. The authors requested the Council to consider Flumerin with a view to its eventual admission to New and Nonofficial Remedies. The Council examined the evidence presented in the report of Dr. White and his collaborators and agreed with the authors that "the number of cases treated is sufficient to demonstrate that this mercurial is of value, but is too small to permit the allocation of the drug to a definite place in the therapy of syphilis". The American Medical Association's Chemical Laboratory examined the new drug and the tests and standards proposed for its control and reported to the Council that the chemical data appeared satisfactory. The Council reports that the acceptance of Flumerin for New and Nonofficial Remedies must await confirmatory clinical evidence; but because of the fact that Flumerin is a definite chemical substance and because of the evidence in the paper, a trial of it in selected cases may be warranted.—(*Jour. A. M. A.*, Sept. 9, 1922, p. 897.)

SOME ANALYSES FROM NEW HAMPSHIRE.—A recent "Food and Drug Inspection Number" of the *Bulletin of the New Hampshire State Board of Health* contains the following information in regard to the composition of nostrums: Potion Antilaiteuse (N. A. Sirois) consisted of a mixture of Epsom salt and powdered juniper berries. Chipwa Indian Root Blood Purifier (Lucy Royer) consisted of Epsom salt and two or three simple herbs, such as mandrake, spikenard and sarsaparilla. Best Catarrh Remedy (Lucy Royer) consisted of a dilution of tannic acid in glycerin. Nervtone Tablets (A. F. Schambier) contained arsenic and strychnin. Angiolymphe du D'Rous (L'Angiolymphe Laboratory, Dr. P. Roux, Angiers, France).—A tuberculosis cure containing 1.5 percent solution in water of what is almost wholly sugar, with the possibility of the presence of a small amount of some glucoside. Noonan's Hair Petrole (T. Noonan & Sons Co.) contained 17.02 percent of alcohol, salicylic acid and about 12 percent of alcohol, salicylic acid and borax. A La Corbeille Fleurie Eau de Quinine Compound Hair Tonic (Ed. Pinaud) contained 65.75 percent of alcohol and a small amount of quinin. Parker's Hair Balsam (Hiscox Chemical Works) was a strong solution of lead acetate with sulphur. Hay's Hair Health (Philo-Hay Specialties Co.) was a solution of lead acetate with sulphur. Dr. Durand's Acme Hair Rejuvenator (Parisian Hair and Corset Stores) was a solution of lead acetate with sulphur. La Toilette Francaise (Elite Restorer Co.) contained 1.66 percent of alcohol, and was an ammonical solution of silver nitrate. Inecto-Rapid Gray Hair Remedy (Inecto, Inc.) was a hair dye of the two-solution preparations type, having hydrogen peroxid as one solution and paraphenylendiamin for the other. Gillespie Scalp Invigorator (Gillespie Mfg. Co.) contained 20.88 percent of alcohol, together with glycerin, borax and red pepper. Westphal's Auxiliator (Paul Westphal) contained 45 percent of alcohol, glycerin and borax. Woodbury's Combination Hair Tonic (John H. Woodbury) contained 26.59 percent of alcohol, with resorcin. Mme. Fried's Henna (Mme. Fried) consisted of henna or a similar herb with considerable copper and iron salts. Farr's Gray Hair Restorer No. 1 (Brookline Chemical Co.) contained an ammonical solution of silver nitrate. Wyeth's Sage and Sulphur Compound (Wyeth Chemical Co., Inc.) was found to be a solution of lead acetate with sulphur. Ess-Tee-Dee (Smith T. Dustin) was found to be a solution of arsenic with borax. Victor's Antiseptic Liquid Shampoo (T. Noonan & Sons Co.) was found to be essentially a solution of soap. Danderine (Knowlton Danderine Co.) was found to contain 8.77 percent of alcohol, together with salicylic acid and borax. Flora de Lilie Complexion Preparation (Flora de Lilie Co.) was found to be a suspension of bismuth subcarbonate and calcium carbonate with borax. Champlin's Liquid Pearl (Champlin Mfg. Co.) contained 2.35 percent of alcohol and was a suspension of bismuth subcarbonate and calcium carbonate. Cooper's Complexion Beautifier (Cooper & Co.) was a suspension of bismuth subcarbonate and calcium carbonate. Pompeian Hair Massage (Pompeian Mfg. Co.) contained 15.03 percent of alcohol, with arsenic, borax, quinin and capsicum.—(*Jour. A. M. A.*, Sept. 16, 1922, p. 985.)

TETHELIN FAILS.—In 1916, T. Brailsford Robertson isolated from the anterior lobe of the pituitary glands of cattle a substance to which he gave the name of tethelin, and which he regarded as the active growth-controlling principle. Tethelin was hailed as a product capable of accelerating the healing of wounds and promoting recovery after inanition. Now a report has been published of feeding experiments carried out at the Institute of Physiology in University College, London, which failed to point to any influence by the oral administration of the anterior lobe substance on the growth of animals. When the manufacture of tethelin was taken up in 1918 by a pharmaceutical firm, the Council on Pharmacy and Chemistry considered the product. It was found that there was no adequate evidence for its value as a therapeutic agent, and hence the Council postponed definite action on the product until definite evidence had been obtained. Now, however, in part because of the unfavorable report of the English investigation, the Council has concluded the consideration of tethelin and declared it inadmissible to New and Nonofficial Remedies.—(*Jour. A. M. A.*, Sept. 16, 1922, p. 972.)

ANGOSTURA BITTERS.—Newspaper advertisements for Angostura Bitters state that Dr. W. C. Wile, formerly vice-president of the American Medical Association, testified that he used the preparation in his practice. Dr. Wile was fourth vice-president thirty-six years ago. Dr. Wile was in the nostrum business himself and wrote many testimonials. The attitude of the American medical profession toward such activities as those credited to Dr. Wile is entirely different today from that of thirty-six years ago. According to the label, Angostura Bitters is made from pure rum, containing about 45 percent of alcohol.—(*Jour. A. M. A.*, Sept. 23, 1922, p. 106.)

GRAHAM'S NEUTROIDS.—This alleged cure for obesity is put out by one R. Lincoln Graham, M.D., New York City. (Graham claims to be head of "the famous Graham Sanitarium" of New York City, where, it is said, a new method has been discovered by which the obese, though gluttonous and lazy, may reduce without abandoning either gluttony or laziness!) Graham declares that his nostrum contains "no thyroid extract, no free iodids—or harmful drugs of any kind". However, the A. M. A. Chemical Laboratory found Graham's Neutroids tablets to contain impure iodol, 50 percent; magnesium carbonate, 43 percent; starch, 4 percent; talc, 3 percent; and iron, a trace. Iodol is tetra-iodo-pyrrol, which contains nearly 89 percent of iodin. It was formerly described in the U. S. Pharmacopeia. Iodol is distinctly poisonous; even when it is applied externally, poisoning may occur.—(*Jour. A. M. A.*, Sept. 30, 1922, p. 1136.)

INTRODUCING A NEW DRUG.—To what extent are the claims made for a new drug tinctured by commercial considerations, even though put out as the result of investigations carried out by the scientific staff of a firm of standing? And even if the drug is the result of studies carried out by investigators who have no commercial connections there is the question: To what degree has the investigator's enthusiasm tinctured his judgment?

(Continued on Adv. page

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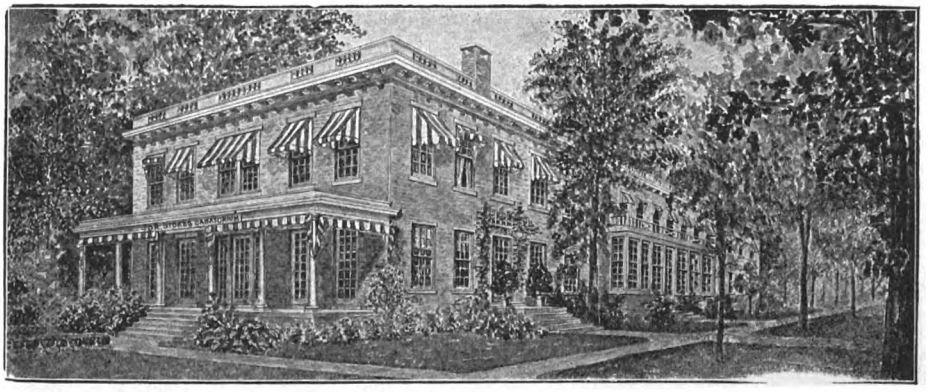
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number of physicians abstain from the use of a new drug, until its acceptance for New and Nonofficial Remedies gives assurance that it is worthy of trial. What seems to be an almost ideal method of introducing a new drug has been followed in the case of "Flumerin", the name given to the disodium salt of hydroxymercuri-fluorescein. This drug has been elaborated by White, Hill, Moore and Young of Johns Hopkins. These men have declared the composition of the drug, have reported animal experiments of promise, and have demonstrated its efficiency in clinical trials. The investigators announce, however, that the drug will not be commercially available unless independent clinical study confirms their favorable finding that the drug is of value in the treatment of syphilis. That syphilologists may feel warranted to make such trials, Dr. White and his collaborators requested the Council on Pharmacy and Chemistry to examine the evidence for the preparation. This the Council did, and it has published a preliminary report, stating that the drug is suitable for clinical trial in selected cases. If Flumerin becomes an addition to our *materia medica*, it will be as the result of the orderly procedure: (1) demonstration of its chemical identity and uniformity; (2) animal experiments which give promise of therapeutic value; (3) clinical trials under the auspices of the discoverers, and (4) confirmation of its therapeutic worth by independent clinical investigations. —(*Jour. A. M. A.*, Sept. 30, 1922, p. 1149.)

NEW AND NONOFFICIAL REMEDI ES

STERILE SOLUTION OF MERCURY OXYCYANIDE.—Each ampule contains 5 Cc. of solution, representing 0.008 Gm. (⅛ grain) of mercuric oxycyanide-N. N. R. For a discussion of the actions, uses and dosage of mercuric oxycyanide, see New and Nonofficial Remedies, 1922, p. 192. Gradwohl Laboratories, St. Louis.

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(Continued in November issue)

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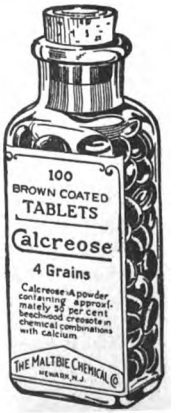
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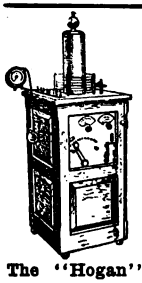
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ORIGINAL ARTICLES

BILIARY TRACT INFECTION AND ITS DIFFERENTIATION FROM ULCER.*

CHARLES LOUIS MIX, M.D.

CHICAGO

By biliary tract infection I mean generic infection of the biliary tract. The infection may be a common-duct affair which usually is not secondary to gall-stones, or there may be an infection in the cystic duct which may obliterate it and give a much dilated gall-bladder containing a mass of mucus, or there may be an intramural infection of the gall-bladder which may be associated with stones, either cholesterin or calcareous stones. Usually the calcareous stones mean infection. The cholesterin stones are associated with pregnancy, cholesterin in the blood-stream, and similar etiologic factors. Of course there are cases where the infection proceeds still further into the liver with involvement of the hepatic duct and ultimately a cholangitis. When I say "biliary tract infection" I include all these pathologic entities in the generic term because I think that we must first conclude, in studying a given case, that the trouble lies in the biliary tract, and then subsequently determine what part of the biliary tract, by analysis of the case in hand, is infected.

Age has a great deal to do with gall-bladder symptomatology. Usually we find ulcers beginning in the young and biliary tract infection later in life. It is true that gall-stones have been found in babies and in young unmarried and married women, but it is not common for them to occur much before the age of forty. Biliary tract infection if diagnosed before the age of forty must be pretty well fortified by diagnostic arguments if it is to be accepted. The burden of proof is upon the one who insists that biliary tract infection is present in young individuals.

A very important point in the case history of patients with biliary tract infections is the matter of weight. It is a fact that biliary tract infection, as a rule, does not produce emaciation. Every case of ulcer is apt to be associated with the loss of weight,—not necessarily, but I venture to say that 95 per cent. of these cases are associated with such loss. If you recall the ordinary run of patients with biliary tract disease you will agree that they are individuals who are fairly well nourished and past forty years of age. If you recall the patient with peptic ulcer, he is apt to be an under-nourished individual of less than forty. In cases where the ulcer has progressed for any length of time, emaciation is almost invariably present. The emaciation varies with the location of the ulcer. If it is situated in the stomach it produces more loss of weight than if it is located in the duodenum. On the duodenal side of the pylorus an ulcer is usually attended with only about a 10 percent loss. If, for instance, a patient ought to weigh a hundred and fifty pounds, he is apt to weigh one hundred and thirty-five if he has a duodenal ulcer. If the ulcer is in the duodenum, then the weight is apt to be constantly lower than normal. If it is in the stomach the patient is apt to have a fluctuating weight, more or less coinciding with the fluctuations of the ulcer. Ulcers on the lesser curvature side of the stomach produce more emaciation than those on the posterior wall, anterior wall, greater curvature or fundus.

Another important subject for inquiry in getting the history of the individual, besides age and weight, is the periodicity of attacks. No story of infection in the abdomen or of ulcer is complete without reference to the time development of the case. Those individuals who have ulcers of the duodenum always have periodic attacks. They are apt to occur as exacerbations in the spring and fall,—not necessarily, but likely so to occur. Patients with ulcer of the stomach have periods of attack and periods of freedom, but these are usually separated by much longer intervals, sometimes five or six years.

Attacks that occur from infection of the gall-bladder and biliary tract usually are at first associated with long intervals of freedom. A person may have an attack and not have another for two years, then another in one year and

(*) Address in Medicine given before the Section on Medicine of the Indiana State Medical Association, Muncie session, September 29, 1922.

the next in six months, the interval becoming constantly shorter until it may become a continuous performance.

The duration of the attacks is a matter of importance. In ulcer of the stomach the attacks are a matter of weeks. In ulcer of the duodenum the attack is usually a matter of three or four weeks followed by a period of calm. In gall-bladder infections the period of attack is short;—a matter of hours in the early cases, sometimes of two or three days. A person will be taken with a bilious attack and be quite ill, but within forty-eight hours will be back at work. Not so with a patient who has an ulcer of the duodenum. He is grumbling about his symptomatology for a month or six weeks at a time, and will then have a spontaneous remission for a month or two, finally to succumb to another seizure.

Always remember that stress must be laid upon the course of the case, because as you develop the history by questioning the patient it will occur to you that the disease in question is either ulcer or biliary tract infection in most of these abdominal disturbances, just from a consideration of the periodicity of attacks alone.

Very much more important than this matter of periodicity is the matter of pain. Practically all cases of ulcer are associated with pain. Very few of them are latent—very few indeed. There are some ulcers of the stomach which run a latent course, chiefly those with an onset of hemorrhage, but I do not think that you will ever find an ulcer of the duodenum in which latency is present. There are cases of biliary tract infection in which the early incidence of pain is rather infrequent and slight, but almost invariably pain will be present in the story.

There is one great difference between the pain of biliary tract infection and that of ulcer and that is the direction of radiation of the pain. One of the first questions is, "Where do you have the pain and what is its radiation?" As to mere location, the pain in biliary tract infection is not necessarily at the junction of the tenth rib and the costal border. It may be anywhere along the subcostal margin or in the back, but it is almost invariably somewhere in the right upper quadrant. In ulcer cases the pain may be seated in the epigastrium, and sometimes even in gall-bladder cases it is so situated; hence it happens at times that when you inquire into the mere matter of location of the pain you are more or less up in the air so far as coming to a definite conclusion by location alone is concerned, but when you inquire as to the *radiation* of the pain you begin to get valuable information.

In ulcer of the stomach the pain is never radiated into the thorax, whereas in biliary tract affections such radiation is the rule. There is a reason for this, and the explanation is to be found in the relationship of the subdiaphragmatic ganglion. This is a unilateral ganglion, located beneath the right lobe of the liver, and in the transverse fissure, and it is connected with sympathetic nerve fibers plus pneumogastric fibers and phrenic nerve fibers. The phrenic nerve is not merely the motor nerve of the diaphragm. It contains many sensory fibers, some going to the root of the neck, some between the shoulder-blades in the back, some to the right pleura, some to the pericardium, some to the mediastinum, some above and some beneath the diaphragm. Whenever there is irritation from infection of the peritoneum in the transverse fissure of the liver there is apt to be, because of this sympathetic relationship, a reflex pain somewhere in the thorax. Hence, it happens that some attacks of biliary tract infection may be associated with pain in the mediastinum, some with pain between the shoulder-blades, some with pain in the back, neck or chest. Some of the attacks may be thought to be pleurisy in the early stages, but they are really due to disturbance in the biliary tract and are caused by phrenic nerve reflex pain. Many of these infections involving the subdiaphragmatic ganglion are hematogenous in origin, but many of them are borne by lymphatics from disease elsewhere in the abdomen. Thus biliary tract disease may be secondary to ulcer in the region of the pylorus, being borne by the lymphatics, or it may be hematogenous as in typhoid fever.

When I first studied medicine I was either led or permitted to believe that germs had the power of making their way through the down-flowing bile current up into the gall-bladder. This is nonsense since germs have no way of propelling themselves against the descending stream. But just as indigo blue can ascend the lymphatics in the walls of the common duct, floating in the lymph, in precisely the same way germs may make their way by the lymphatics to the transverse fissure of the liver and so affect the subdiaphragmatic ganglion and its component nerve tracts.

With this understanding it is easy to comprehend the direction of the radiation of the pain and the immense aid which it is in diagnosis. In biliary tract infections thoracic radiation of pain is the rule and in ulcer of the stomach or duodenum it does not occur. Of course when biliary tract infection complicates the later stages of ulcer, the history of pain marks its advent. You then have the picture of early pain in the epigastric region followed in later months or years by pain in the territory of distribution of the phrenic nerve supply in the thorax.

There is another important factor concerning pain and that is its type. It may be from either one of two sources: either a peritonitic pain due to pericholecystitis or perigastritis, or it

may be a rhythmic unstriped-muscle fiber pain, due to spastic contraction. It is evident that pain which is due to the rhythmic over-contraction of unstriped muscle fiber may occur in many cases of biliary tract infection, and it is not difficult to pick out a pain of this sort from others. If you ask the patient for a description of the pain he or she can usually well describe the rhythmical contraction of unstriped fibers around the gall-bladder or common duct so that you can distinctly differentiate it from the pain of peritoneal origin, or you may come to the shrewd conclusion that the pain is peritonitic, due to adhesions between the gall-bladder and the duodenum even before the x-ray plates have been prepared.

Of further differential value is the fact that pain due to inflammation of the peritoneum always has associated with it tenderness and soreness on pressure, whereas pain due to unstriped muscle-fiber contractions is relieved by pressure. Thus, again, there is a means of telling what sort of pathologic process is responsible for the pain.

A final matter for inquiry in regard to pain is of importance and that is the time of pain with reference to the time of meals. A pain which comes on at any time, irrespective of meals, is apt to be peritonitic, and of biliary tract origin. A pain due to disease of the stomach, either ulcer or otherwise, or to ulcer of the duodenum, has a time relationship to food. Usually in cases of frank ulcer of the stomach the pain immediately follows the taking of food but that is not true of ulcers on either side of and close to the pylorus. The ulcer close to the pylorus if situated on the gastric side has exactly the same symptomatology as on the duodenal side, and there is no means which I know of by which, from a history of pain alone, one may differentiate ulcer on the gastric side from that on the duodenal side of the pylorus. This is because the pylorus contracts down with a good deal of power on the sore ulcer on either side of the pylorus, and so causes the pain. The pain in duodenal or pyloric ulcer coincides with the empty stomach. As soon as food is put into the stomach it immediately starts through the relaxed pyloric ring; with the relaxation of the pyloric ring, the pain is gone, but as soon as the stomach is empty, two or three hours after a meal, the pyloric sphincter begins to contract down upon the ulcer and the pain begins once more. Invariably in these cases of duodenal ulcer, if something is put into the stomach, even a drink of water, a little bicarbonate of soda or a drink of milk, it will relax the pylorus and stop the pain.

If the ulcer is on the stomach wall the pain appears within half an hour. Its appearance is usually very prompt, and if the ulcer is on the anterior wall it is very prompt indeed. We can now frequently decide clinically as well as by the x-ray plate where the ulcer is located. If it is in the fundus the pain is apt to be prompt and it will last as long as food is in the stomach and is irritating the ulcer. If the patient vomits and the contents are thrown out the pain ceases, but if in the case of a duodenal ulcer the patient should provoke vomiting the pain would begin just so much sooner because the pain is due to contraction. If there is a saddle ulcer involving both sides of the pylorus the pain begins two hours or so after eating.

Such a time relationship is not true of gall-bladder pain. Such pain has no relationship to the taking of food. It may occur at two o'clock in the morning. The first attacks of onset are very apt to be nocturnal. Subsequently they may occur at any time. The patients are absolutely uncertain as to any relationship between the taking of food and the pain and this fact should arouse the suspicion of biliary tract infection.

Another very important topic for inquiry in taking the patient's history is vomiting. Of course it is important to know whether vomiting is present or absent and if present it is very important to know all about it. Does it take place promptly after a meal? Or does it occur remotely after a meal? Does it take place once or twice? Does it cease after expulsion of food or does it continue? If it continues does it lead to vomiting of bile? If so, how long does it last? Are there six, seven, eight or nine attacks of vomiting or just one? A great deal depends upon the answer to these questions. In ulcers of the stomach the patient stops vomiting as soon as the contents are out. The reason is obvious; as soon as the food is out the patient is relieved. You have the same thing in carcinoma of the stomach—the stomach contents are expelled and the patient is easier. Such vomiting is a defense symptom.

In case of an ulcer on the gastric side of and close to the pylorus vomiting does not take place. If there is food in the stomach the patient is comfortable for then the pyloric sphincter is relaxed and does not pinch the ulcer. Such a patient gets to be a night feeder, with a glass of milk at his bedside so that he may take it during the night. It would be a very foolish thing on the part of Nature to dump the food out in these cases. The thing to do is to keep food there and the pylorus relaxed. Hence in an ulcer in this location absence of vomiting actually aids the patient. Never in a case of pure, uncomplicated ulcer of the pylorus does vomiting take place. If it does occur it is because there is peritonitis, and then reflex vomiting may, of course, occur.

If the ulcer is on the lesser curvature vomiting is extremely common and practically the rule, the reason being that ulcer on the lesser curvature is located at the maximum development of the nerve supply, a place where reflex

vomiting is most apt to take place. The patient with ulcer of the greater curvature will not vomit much. The law of vomiting in lesser curvature ulcers was illustrated in the case of a man thirty-four years of age who had a gastrojejunostomy done last Thursday. He vomited a great deal, such vomiting suggesting lesser curvature ulcer, and when he had his fluoroscopic examination we thought we saw the ulcer at the lesser curvature and at operation we found a large ulcer on the lesser curvature close to the pylorus. The gastrojejunostomy had to be done because he had a gastric retention. The frequency of the vomiting in his case led to the conclusion that the gastric ulcer must be on the lesser curvature.

Patients with biliary tract infection may have vomiting or they may not. If vomiting is present it is always of food first and then bile. If you think of a patient with gastric ulcer, does he vomit bile? No. He vomits food first and then he stops, unless there be an added associated peritonitic symptomatology. The biliary tract patient vomits six or seven times, or maybe more, and he always ends by vomiting bile. Like the patient with a tabetic crisis, he has a series of vomitings and toward the end nothing but bile comes up. I am of the opinion—I may be wrong, and will cheerfully say I may be—that the vomiting is after all a reflex anastalsis in the duodenum, due to a disturbance of the law of reciprocal innervation, whereby bile passes backward through the pylorus into the stomach where it acts as an emetic just as does ox gall, and causes repeated vomiting of bile. Of course, there are those who say that you can short-circuit the bile-duct and conduct bile right into the stomach and not get vomiting. Perhaps the argument is valid. Yet, I believe it is a reflex peritonitic disturbance which leads to the vomiting, and I think there is always in this group of cases a reversed duodenal anastalsis, sweeping bile into the stomach, and causing repeated emesis.

Some facts in patients with abnormal pyloric rings are interesting. Occasionally you encounter patients with biliary tract infection who show gastric anacidity. Most patients with biliary tract infection show hyperacidity when you make the Rehfuss test, but in some patients with biliary tract infection alkalin duodenal contents without bile regurgitate into the stomach, neutralizing the acid, and so causing anacidity. I saw a case just the other day in which I am sure that the anacidity was entirely due to a widely relaxed pyloric ring. Even five hours after the meal there was evidence that the duodenal contents were regurgitating into the stomach and producing neutralization of the hydrochloric acid.

Of very great differential value is the question of general infection. An ulcer of the stomach is an end-result or end-product of infection. A gall-bladder infection is very different. What is the history, for example, in a patient suffering from ulcer of the stomach and duodenum? Never, in these cases, do we get a history of coated tongue, headache, chills and chilly sensations, arthritis, neuritis, febrile attacks, or an increase of the leukocytes. In the biliary tract infections some of these conditions are always present. In a given case of disease of the right upper abdominal quadrant when you ask yourself, "Is it a case of infection or not?," you are really asking yourself, "Is it biliary tract infection or is it not?"

In a patient with ulcer headache is the exception. You do not find the coated tongue but the clean tongue—the hyperacid tongue which many clinicians have noted. Such patients are not subject to arthritis unless they have some other source of infection. They are not subject to neuritic pains and febrile seizures; they do not have attacks associated with chilly sensations or with rigors. You never find the temperature above normal. You never find an increase of the white cells when you make the leukocyte count. These things come only in biliary tract infections. It frequently happens that one is able to make a diagnosis by these considerations alone. I recall the case of a woman treated by a very prominent physician in Buffalo some years ago for ulcer of the stomach. She had an infection of the gall-bladder which was operated upon and cured and the diagnosis was based upon signs of infection and particularly an infectious headache. When carefully questioned she recalled symptoms which she had not reported to any physician previously because her attention had not been directed to them.

There are many cases in which the whole symptomatology may be reflex and gastric and it is difficult for one to make out the differential diagnosis in such cases, but if you can discover evidences of focal infection, you are readily rewarded in the diagnosis.

Of course, the laboratory helps much in these cases. It is your duty in every case of disease of the stomach to find out as much as possible by laboratory methods. My method is the Rehfuss, not the old Ewald method, for I think the latter is inadequate. If you pass a Rehfuss tube and get eight or ten specimens collected at half-hour intervals and examine them carefully you will obtain a set of findings from the stomach which are of great importance. Of course, we expect a hyperacidity in most cases of ulcer of the stomach and in most cases of infection of the biliary tract, but not necessarily so in the latter.

Very important also, and we never omit it, is the careful examination by the x-ray because you will obtain by the x-ray, as a rule, confirmation of the clinical diagnosis if the examination

is carefully made. I am one of those who believe that the physician should be present at every fluoroscopic examination of his patients. He need not be there when the plates are made, but he should watch the barium making its way into the stomach and out through the pylorus, and should have a very good general idea of what is going on in the stomach and upper part of the abdomen at the time of the fluoroscopic examination. You cannot describe things by word of mouth, and seeing it yourself is worth much more than many reports. Then after the plates are made, the immediate, the half-hour and the five-hour plates, you can inspect them and compare them with what you saw in the clinical examination.

Is the physical examination of much importance? Not really very much. But you have to differentiate these diseases from others in the right upper abdominal quadrant. As a rule, ulcer of the stomach and biliary tract infection are not associated with palpable findings. There is only a tenderness and slight soreness in the region of the morbid process. Ulcer of the stomach is usually associated with an area the size of a quarter or a half dollar, sometimes an area as small as a dime, and that tender area locates the ulcer. Ulcers of the duodenum present a larger area of tenderness which lies to the right of the midline and above the umbilicus. Patients with biliary tract infection show tenderness and soreness, usually close beneath the right costal margin. It is not fair to press your fingers deep into the abdomen, and then, because he winces, say that he has an infected gall-bladder. I would not wish a physician to press too vigorously my right subcostal area, because he would doubtless hurt me, and then I might be suspected of having some gall-bladder infection. Always be fair in the examination. When you make pressure on one side press equally on the other—"Where is the pain?" "Is it more intense on one side than on the other?" "Is it only on one side?"

If you decide upon a diagnosis of biliary tract infection it may be one of many things. It may be a morbid process located within the gall-bladder or it may be an intramural cholecystitis. Many patients with biliary tract infection present symptoms which have come on abruptly. Such patients with acute symptoms coming on within a few hours may have to be hurried to the hospital for examination and eventual operation. Chronic cases of gall-bladder infection may or may not be associated with gall-stones. Sometimes the x-ray, as in the beautiful collection of plates which Dr. Kirklin has here on exhibition, will show the stones or it will show the outline of the gall-bladder with adhesions to the somewhat distorted duodenum. Sometimes the gall-bladder shadow is itself distorted by reason of such adhesions, and the duodenal cap is frequently distorted by traction. In many instances you may be wholly unable to say whether the cholecystitis is or is not associated with cholelithiasis. Dependent upon the type and degree of infection, is a possible decision to treat the case surgically or medically.

I do not believe in gall-bladder drainage, certainly not by the oral method and usually not by the surgical method. If drainage alone is done it does not give good end-results. The patient after any but a very prolonged surgical drainage is within two or three years much the same as when first operated upon. For this reason cholecystectomy has come into general use rather than cholecystotomy, and many surgeons will not drain the gall-bladder because it will not give relief sufficient to warrant its adoption as a standard operation.

There are certain places where stones in combination with infection produce very spectacular results. When infected stones are at the neck of the gall-bladder they may produce a very typical fever which was described by Charcot and is known as the "angular fever of Charcot". If anywhere in the body there is a point where a great deal of infectious material can be poured into the blood-stream within a short time the effect is comparable to a catheter chill or to the chill following the introduction of vaccine into a vein. There is a very abrupt and usually a high rise in temperature. Wherever infection is suddenly introduced into the blood, as in the case of the corpus spongiosum from urethral catheterization, or in the thrombosis of veins in Peyer's patches in typhoid fever previous to hemorrhage, or in stones associated with traumatization and infection of the rich network of lymphatics at the neck of the gall-bladder, there is a very sudden rise in temperature, and a very sudden drop. The rise may start at noon time and run to 103 degrees F. and be normal at six o'clock. This "angular fever of Charcot", found in these gall-bladder infections, is almost pathognomonic of infection of the *neck* of the gall-bladder, so that we are able to formulate the conclusion at times of a stone in the neck of the gall-bladder with purulent infection.

If the infection of the gall-bladder be an abscess with blockade of the cystic duct, so that the stone is imprisoned, there are signs of sepsis with a large gall-bladder, denoting empyema. In these cases there is added to the biliary tract symptomatology with all the signs of sepsis with definite enlargement of the gall-bladder. Enlargement alone, without sepsis, may indicate merely hydrops of the gall-bladder.

I have said what I wished mainly to say, namely, that in general if one pays attention to the facts of age, weight, periodicity, pain, its location and radiation, its character—as to whether peritoneal or caused by unstriped muscle spasm; vomiting, its character and its association with bile, the time of vomiting, the matter of examination of the stomach contents by

the Rehfuss test meal and all the x-ray examinations, and above all to the collateral evidence of infection—if, as I say, we pay attention to all of these things, we shall be able to differentiate the great bulk of our cases, both gastric and duodenal, from biliary tract infection in general. Of course, the higher our percentage of successes with this differentiation, the better for the patients because we shall not be led to do wrong things. We shall not be putting gall-bladder cases upon an ulcer diet, which is so frequently done time after time, especially in those cases of biliary tract disease in which the gastric symptoms are paramount. The most important differential point which I can mention as differentiating between ulcer and biliary tract infection is the question of infection—headache, arthritis, neuritis, fever, chilly sensations, leukocytosis, and coated tongue as distinguished from the red, acid tongue of ulcer.

CONGENITAL PYLORIC STENOSIS*

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In this brief presentation I cannot discuss at length the nature of congenital pyloric stenosis, nor the related condition known as pylorospasm. That this condition occurs with much more frequency than was formerly believed is undoubtedly shown by the experience of pediatricians in large clinics, and in private practice; we know that this condition is actually congenital inasmuch as well marked instances have been found in the unborn fetus, even as early as the seventh month of gestation.

Until recent years the condition when recognized was regarded as little more than a calamitous curiosity. An occasional case was operated on with discouraging mortality, until the genius of Fredet and Rammstedt devised the procedure which bears their names, and which has placed us in firm control of this heretofore fatal malady.

Without referring to the ultimate etiology, we have to deal with a condition of actual obstruction due to an enormous hypertrophy of the pyloric sphincter. This hypertrophy, of fetal origin, progresses with more rapidity after birth as a result of the institution of normal feeding which increases muscular activity with its concomitant hypernutrition and the resultant great thickening of the muscular ring.

The symptoms of obstruction rarely begin before the tenth day and more frequently in the third week of life; some cases not manifesting themselves until as late as two months.

The onset is usually quite sudden; the vomiting of food is uncontrollable, persistent, and projectile in type; the stomach contents being violently discharged to the distance of from one to three feet or more. Preceding the vomiting there are persistent peristaltic waves (which are plainly visible) evincing the attempts of the stomach to overcome the obstruction. These waves flow from left to right and follow almost immediately the ingestion of food, and are in turn directly followed by the characteristic projectile vomiting. Constipation is marked. From the onset of these characteristic symptoms there is a rapid loss in body weight from food and fluid starvation, and the inevitable tendency is towards death.

The diagnosis is not difficult. The projectile vomiting coming on at the characteristic time, and persisting (in spite of the administration of atropine, which appears to be a panacea for uncomplicated pylorospasm), is enough; but in addition to these conclusive signs there is a small tumor in the upper right quadrant which can be very plainly palpated in many but not all cases. The diagnosis once made, no time should be lost. The child's vitality should be conserved by immediate action which in itself is no heroic ordeal. The Rammstedt operation is both simple and safe and the results ideal. Ether is advocated by some surgeons and I used it in one case, however the free injection of one-half percent novocaine is thoroughly satisfactory and is certainly safer. The abdomen is opened by a two-inch incision to the right and above the umbilicus; the pylorus is drawn into the wound and the thickened muscle which forms a tumor much the size and shape of an olive is grasped by the thumb and index finger of the left hand. Choosing the most avascular area, a longitudinal incision is made through the peritoneum and the hypertrophied muscular fibres down to the delicate pale submucosa, which must be approached with great care, as wounding the mucosa is a complication which may well be disastrous. Much stress has been laid upon the importance of spreading the sides of the pyloric incision by means of forceps so that the mucosa shall bulge well up between the walls of the cut. However, I believe that if the muscular fibres are carefully and completely separated by clean, accurate incision, spreading the walls of the cut is not necessary. When a sphincter muscle is divided there ensues a contraction of both cut ends towards the middle which invariably spreads the gap. I relied on this principle in the cases which were referred to me and the results have strengthened this belief. The remaining step in the operation is the careful closure of the abdomen by layer sutures, reinforced by silk-worm gut, and adhesive strips.

I will offer a brief report of four typical cases occurring in the practice of Dr. Jas. C. Carter, upon which I did the Rammstedt operation, which was followed in each case by a prompt recovery with a complete cure of all symptoms.

(*) Presented before the Surgical Section of the Indiana State Medical Association at the Muncie session, September, 1922.

Case 1—G. A. K., weighed 7 pounds at birth; no serious disturbance for two weeks, when violent vomiting after meals began and persisted with regularity. It was of the projectile type and was preceded by well marked peristaltic waves from left to right; loss of weight was promptly manifest until the baby weighed 4½ pounds. A small tumor could be felt above and to the right of the umbilicus. Pyloric stenosis was diagnosed and under ether the Rammstedt operation was performed. The relief was immediate. Some occasional vomiting occurred which I explained on the theory that a few muscular fibers had been left which constricted the pylorus, until they gave way under the much stronger contraction of the divided pyloric strands of muscle. The improvement was rapid and steady; in three months it weighed 10 pounds and in 5 months later it weighed 19 pounds 9 ounces and has since then become a big healthy infant.

Case 2—H. H., male, born Sept. 17, 1921, birth weight not noted; no serious disturbances until the beginning of the second month, when it began to vomit after feeding, at first in moderate amounts, which progressively increased in spite of atropine. Constipation was pronounced; the vomiting assumed the projectile type; the peristaltic waves after feeding were marked. On Nov. 1st the weight was 12 pounds and by Nov. 11th it had decreased to 9 pounds. Consent to operation was given and under novocaine the Rammstedt was performed. The vomiting and other untoward symptoms at once disappeared and the child began to gain in weight at the rate of approximately 7 ounces a week, so that at the end of seven months it weighed 19 pounds and has continued further normal increase since that time.

Case 3—H. W. L., male, born Feb. 13, 1922. When three weeks old began to vomit after feeding and was treated six weeks with various artificial foods after having been weaned. The weight dropped from 12 to less than 7 pounds; the projectile vomiting, peristalsis, constipation, etc., established the diagnosis. The emaciation was extreme, the infant appearing to be little more than a living skeleton. It seemed to be almost a hopeless case and the mother strongly objected to an operation but eventually consented as a last resort. A Rammstedt was done under novocaine on April 27th. During the ensuing 36 hours there were a few spells of moderate vomiting and it then ceased entirely. The gain in weight began at once, and I received a letter from the family physician, dated Aug. 28th, just four months after the operation, stating that the baby now weighs 16½ pounds, a gain of 10½ pounds.

Case 4—S. W., male, born April 14, 1922, birth weight 9 pounds 12 ounces. At the end of the third week it began to vomit violently after feeding and was very constipated; the characteristic peristalsis was plainly visible and the small tumor was felt in the right upper quadrant. On May 22d the weight had decreased to 7 pounds 12 ounces, a loss of two pounds. The Rammstedt was done and the baby was taken home two days later and made a rapid and complete recovery and is now a hearty, well developed infant.

In closing this brief presentation of such an important subject, I will summarize by calling attention to four points:

1st.—These cases occur with more frequency than is generally believed, probably the most of them being overlooked.

2nd.—The diagnosis is not difficult.

3rd.—The treatment is surgical.

4th.—The Rammstedt operation is simple, safe, and the results are brilliant, gratifying and permanent.

DISCUSSION

DR. JAMES C. CARTER (Indianapolis): Please do not gather from what Dr. Pfaff has said that all vomiting babies have pyloric stenosis, and please if you do suspect pyloric stenosis do not take them off the breast. In so doing you have lost the best therapeutic agent for recovery that you have had, that is, the best therapeutic agent after the operation. Every baby spits up more or less. That is not vomiting. In the pyloric stenosis cases the vomiting is of the projectile type, as Dr. Pfaff stated, and the youngster frequently throws food three or four feet. Ordinary vomiting is due to over-feeding and can easily be corrected by reducing the time of nourishment or the amount of food which is given if he is on artificial diet. If you suspect stenosis in any given case I would strongly advise that you take the time to see the baby fed and that you see it fed when it is stripped. You cannot diagnose pyloric stenosis with two or three layers of napkin, a shirt and a dress. If you feed the baby and then watch the abdomen you will see the waves. The men who have written the most about this subject tell you that you can feel the tumor itself in every instance. I do not believe this is true. You may find the tumor mass if you look long enough.

The constipation that is associated with pyloric stenosis is very marked. It indicates the decreased amount of food that is going through and that is one of the important points of the diagnosis. It has been my pleasure to see nine cases, one of which may have been a pylorospasm. Seven of these cases were operated upon and five of them are alive. There is one case of pylorospasm that may have been pyloric stenosis that was not operated and when not operated died. The child was under my care at the time and we were using atropin treatment and were getting results, an increase in weight and so on, but one morning—I don't know whether I had some baleful influence or

not—while I was standing beside the bed looking at it the child proceeded to die right then and there.

The treatment other than surgical which is of most benefit is, first the use of atropin in 1 to 1000 solution. You can safely give up to fifteen drops of such solution preceding feeding without getting any flushing of the face or excessive dryness, although you work up to this one drop at a time.

If you have a true pylorospasm and no stenosis you will get benefit from this method. You will not cure the vomiting but will get enough food through to get an increase in weight and general benefit.

The feeding of thick cereal has been much written about, as was advocated by Sauer of Evanston, and he gets results, but he gets results because he lays down this rule which he never deviates from, that when the baby has lost one-fourth of its birth weight then it is operated, and that rule holds absolutely good. Otherwise, you will have a youngster that nothing will bring back.

Dr. Pfaff neglected to say in his paper that the essential point of the operation is speed, in getting in and getting out. We must avoid shock and not take everything out of the abdomen and have a look. We must get in and out as speedily as is consistent with good operating. Do the operating and then quit.

Another important thing is the restoration of body fluid. In the four cases Dr. Pfaff operated for me we filled the abdomen with salt solution and then put the baby back to bed with a glucose drip. We started the feeding as soon after the operation as we thought practical. The feeding cannot be told about in advance, and we feed them until we get up to what we think proper to get our increase in weight.

DR. W. D. GATCH (Indianapolis): As has been emphasized, there are two classes of cases for which a surgeon may be consulted: the simple pylorospasm and the cases of true hypertrophy of the pylorus. While there might be a mistake clinically about which class you are dealing with, there can be no mistake after the abdomen is once opened, because one of these hypertrophic cases presents a mass of gristle-like cartilage as large as your thumb. Whatever results may be reported from medical treatment, it is hard for anyone who has seen one of these cases to believe that anything short of dividing this thick mass could bring about relief of the symptoms.

I think Dr. Pfaff's excellent results have been procured by his sticking to the proper kind of case. They have all been of the hypertrophic class. I think it is a question whether we should operate on a simple pylorospasm. The results in such cases are very different and apt to be questionable. I know I lost one case of the spastic variety and would hesitate to operate on one of that kind again.

I speak of the differential diagnosis between the two types of obstruction in all modesty, as one who is not a specialist in the diseases of children. In the cases of true hypertrophy which I have observed the distension has been limited to the upper portion of the abdomen. The intestines have been empty. In the cases of pylorospasm there has been distension of the intestines. Whether this holds true in all cases I do not know.

I am glad that Dr. Pfaff emphasized the fact that he cuts down to the submucosa and no farther. In a good deal of the literature the statement is made that the incision is carried to the mucosa. If you do that you get into the bowel. The submucous coat is the only layer of the bowel that has any strength. The mucosa and muscularis are friable, but the submucous coat is a strong one. Some think it is terrible to leave nothing but this membrane between the child and destruction, but as a matter of fact you weaken the bowel in this operation very little. Experiments have shown that in infants this will stand a pressure of sixteen pounds.

There are two or three points in the technic that are interesting. In my own experience I have had more trouble in closing the abdominal wall than in doing the operation on the stomach itself. The wall is so thin that you are in constant danger of wounding something. I think one of the dangers after operation is evisceration. That can be avoided by making the incision very high, so that when you close the abdomen the large liver of the child will come down behind and keep the intestines from pushing out. I think this is a valuable point.

I have attempted once or twice to close over the pyloric incision with omentum or something else, but it is very difficult. There is very little to close over and it seems to be unnecessary. The adhesions that form there do very little harm. I am informed that some of these cases have recovered and have later come to autopsy from another cause, and it has been discovered that the enormous mass of gristle-like cartilage has disappeared.

DR. LOUIS H. SEGAR (Indianapolis): I believe Dr. Gatch has sounded a worthy word of warning, insofar as the diagnosis of congenital stenosis is concerned. Dr. Pfaff said the diagnosis was easy. The open-and-shut case of congenital pyloric stenosis is easy, where you have projectile vomiting, visible peristalsis, starvation stools, emaciation, progressive loss of weight and palpable tumor. There you have an obvious case for surgical interference, but a good many of the babies that one sees with projectile vomiting, and with visible peristalsis, with loss of weight and starvation stools, are not cases of

pyloric stenosis. Those cases sometimes go to the surgeon but the result is in a good many instances distressing. Great care should be taken in the differential diagnosis between pyloric stenosis and pylorospasm. The baby, from the clinical standpoint, presents just the same clinical symptoms in the one instance as in the other. The roentgenogram does not help. Watching the baby's peristaltic waves through the abdominal wall does not help. There is only one way in which you can make an absolutely definite diagnosis between spasm and hypertrophy, and that is to feel the tumor. As Dr. Carter aptly said, many times you cannot feel the tumor. Then what shall you do? You have a little wiggling, crying baby to examine, and if you can stop this wiggling and crying you can find the tumor more easily. You can do this by means of a general anesthetic. Three times I have put a baby under general anesthesia and it has been possible to feel a tumor that was not otherwise palpable.

There is one thing that must be considered in making a diagnosis of congenital pyloric stenosis with the idea of operating, and that is whether the stenosis is complete or incomplete. Dr. Sauer has been unusually successful in the treatment of pyloric stenosis which was not a complete obstruction, by the use of thick cereal feeding, by mixing farina with breast milk and feeding that with a spatula or some other instrument. If the obstruction is incomplete the babies do well and do not need surgery.

The diagnosis is not always easy. It sometimes requires anesthesia to feel the tumor, and if the obstruction is not complete the case is not surgical.

DR. O. G. PFAFF (closing): I believe the matter of diagnosis is not so difficult after all. I think all cases of persistent projectile vomiting which are due to pylorospasm and not to stenosis will yield to the use of atropin—or nearly every case. If they do not yield to atropin and the patient continues to lose weight, I believe when a loss of 25 percent is reached they should be operated. When it is due to pylorospasm I believe there is a defect in the muscle, and the spasm is possible because of this defect. I think if the muscles are divided in such a case we have every right to believe that they will not obstruct and that we have a cured case, even if it is not an organic hypertrophy.

Months or years after these operations some children have died from other causes, and when a postmortem has been held in a few instances, as Dr. Gatch mentioned, they have shown a disappearance of the tumor and almost complete disappearance of the scar.

As to closure, it is sometimes difficult, but I think we should take enough time to close these little fellows up as we do any abdominal case, getting the muscle and fascia together with catgut, then the skin with silkworm gut sutures placed far enough from the margins and left in position long enough to get a complete healing.

EPIDEMIC ENCEPHALITIS AFTER-EFFECTS*

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The mortality of epidemic encephalitis is around 20 percent. Maybe one-third of the survivors recover in from six to twenty-four months. The other two-thirds show either a persistence of troublesome symptoms or some type of organic after-effects. These conditions vary through the scale of physical and psychic abnormalities, from a slight tic to an extensive paralysis; from mental hebetude to insanity.

The most serious lesions occur in the brain stem, the pons and medulla. The gross pathological features are congestion, edema, hemorrhages, petechial and larger, and a doughy consistency of brain tissue. Microscopically the small hemorrhages are shown as more numerous. There is cellular infiltration of the adventitia of the smaller vessels, perivascular exudation, a dense perivascular cellular infiltration, a more sparse cellular infiltration of the white matter; at times evidence of destructive action even into the nuclear areas, sometimes the evidence of connective tissue proliferation, and sometimes the evidence of a reconstructive effort.

The damaging effects of the disease can be appreciated properly only when we keep in mind the character of the pathology and the area of its greater intensity. Congestion, edema, extravasation, infiltration and hemorrhage are all pressure factors. Fibrous tissue is also a pressure factor, but of a different nature from those mentioned, and producing its effect later. Toxine effect is primarily one of chemical irritation. Out of all these factors may arise a confusing array of symptoms, from a diagnostic point of view, and from a failure of resolution most disastrous after-effects may occur.

From current literature at my command I make the following abstracted references:

One report on 75 cases six months after an epidemic. In a general way these patients complained of general weakness, lack of energy and initiative, some headache or sense of fullness in the head, mental dullness and lack of power of concentration, and showed delusions and mental deterioration. There occurred motor disturbances manifest by local spasm, choreiform movements, partial pareses in the oculo-motor area and optic nerve weakness, general convulsions

(*) Presented without reading before the Section on Medicine of the Indiana State Medical Association at the Muncie session, September, 1922.

and hemiplegia. In some cases paralysis agitans symptoms appeared, and these were the most persistent.

A report on 92 cases, one to three years after the acute attack, shows about 9 percent fully recovered and 15 percent not fully recovered but able to work. Of this 15 percent, ten patients had residual cranial nerve symptoms, four had tremor of the tongue and extremities, and all had insomnia, irritability, depression or headache. Two of the whole series were stationary. Of the total 66 percent were in a serious condition. Forty-two of these, almost half of the total series, were of the paralysis agitans type. The remaining twenty were slowly progressive, showing various manifestations.

A report on 78 cases, six to eighteen months after the acute attack, shows a mortality and a recovery of about 25 percent each. Among the other 50 percent there was exhibited a variety of manifestations embracing asthenia, both mental and physical, with much retarded processes in both fields of activity; mental disturbance, some to the condition of insanity; insomnia; partial unilateral facial paralysis; tremors of the face and tongue; clonic rythmic contractions of the muscles of mastication; epileptiform convulsions, hemiplegia and paralysis agitans symptoms.

A report on 145 cases, 90 of which were acute with a death rate of 26 percent. The surviving acute cases with 55 chronic cases in the series makes 115 cases for study of after-effects. Of these about one-third were considered well. The other two-thirds exhibited asthenia, myoclonic phenomena and twitchings, neurasthenia and psychasthenia, psychoses resembling dementia præcox, ophthalmoplegia, difficulty in swallowing and trembling about the lips and tongue, and paralysis agitans symptoms. Two patients developed a glycosuria likely due to irritation at the fourth ventricle.

I report on personal information the following ten cases:

Case 1. Mr. S., age 34. Came to my office Jan. 22, 1921. General attitude and expression one of unusual fatigue. For a few days had been seeing double. Five days previously a slight nausea one day, not persistent. For a week unusually fatigued. There was no pain at this time and was not during his whole illness. Confined to bed two months. Took no solid food for seven weeks—could not masticate and swallowed liquids with great difficulty. For six weeks could not articulate, and most of the time made no sound whatever. For ten weeks could not change position of the body. There was a marked persistent general spasticity. Twelve weeks from the beginning of his illness he could manage to walk, showing some spasticity.

His general symptoms in order of incidence were nausea, weakness, drowsiness, lethargy, shivers during the second week, of sufficient intensity to shake the bed, and spasticity. There appeared early, ophthalmoplegia and expressionless face. A little later general spasticity, coarse tremors, increased heart and respiratory rate. His respiration was nasal and somewhat noisy on account of spastic closure of the mouth. He seemed entirely oblivious to his environment, was aroused only by insistent sharp urging, opening the eyes slightly and immediately lapsing into lethargy. His motor symptoms ran the whole gamut of the cranial nerves and into the long tracts of the arms and legs. His mental symptoms were only a slight delirium during the second and third weeks.

There was not a complete paralysis of any function. General spastictiy was a persistent feature. Applied effort at passive motion was resisted. The teeth were set. The legs were in constantly slight flexed position. The arms were kept in a repose position across the chest in a spastic state, with the wrists and fingers slightly flexed. If the arm were lifted away from the chest by an attendant it retained the flexed position and would remain away from the body until replaced by the attendant. Any motion that might be attempted by the patient was attended by a marked aggravation of the coarse tremor.

In four and a half months from the beginning of his illness he was able to begin light work, gradually doing more, and has worked continuously since. He tires more easily than before his illness and lacks initiative and power of concentration. In a general way he is physically well and is mentally clear. The only patent thing left eighteen months after the beginning of his illness is a slight unilateral tic at one corner of the mouth.

Case 2, Mr. L., age 36. Encephalitis, December, 1919. First three days hallucination and insomnia. For the next five weeks mildly lethargic but able to keep at work as shipping clerk in a paper house, at times walking into objects or against the wall. Later insomnia developed and from lack of endurance and loss of power of concentration he had to quit work. He came to me in March, 1921. The insomnia has persisted to the present time. He never sleeps more than three hours at a time and that infrequently. He goes to bed and rests without any pain or distress. He is mentally clear. About three months ago he tried to work where his duty was to take a miscellaneous lot of small machine parts and put them in boxes, each kind in a separate box. He would get them mixed and had to quit. At present he is night watching in a small factory and tells me he has a feeling of uncertainty as to his doing the work right. There are no pains, twitchings

or spasticities. He carries his right arm in the position of a paralysis agitans, but there are no tremors and he has good use of the arm. There is a slight tremor in the right cheek. He has good use of his whole body, but motion is very much slower than normal, sometimes a suggestion of a shuffle in the walk. His general appearance is one of dejection.

Case 3, Mr. W., age 35. No premonitory symptoms. A mild persistent ptosis, with weakness and lethargy, and no other manifestations. He could be easily aroused but immediately went off into lethargy and remained so for one month night and day. There was an uneventful complete recovery.

Case 4, Mr. M., age 19, was seen in consultation with Dr. Hawkins, Swayzee, Indiana. The case at the time was acutely toxic. The temperature had been 103, but had fallen to 100. He did not seem seriously ill, had a mild broken delirium and insomnia. When approached in conversation was rational. Later lethargy developed. He made a complete recovery, but it was six months before he could do a day's work without undue fatigue. During convalescence there was much eye fatigue which he attempted to correct with glasses without results. The eyes came right with the general condition.

Case 5, Mr. M., age 50, seen with Dr. Hawkins. This case presented a very early paralysis agitans condition of a very marked type. There were no prodromata or early suggestive symptoms of a lethargic type of encephalitis. Was this a case of epidemic encephalitis not giving rise to the early characteristic symptoms? The patient died early in the illness.

Case 6, Miss X., age 30, seen in consultation with Dr. Newell of Converse, Indiana. This case was of the meningeal type. There was ptosis and diplopia. Severe pains occurred in the head, neck and shoulders. There was a constant broken delirium. Death occurred early.

Case 7, Miss Y., age 21, reported to me by Dr. Erle Daniels, Marion. First week vomiting three days, beginning headache which became progressively worse. At the end of this week diplopia. During the second week cramps in the legs, delirium, lethargy, spasms of the muscles of the neck and some shivering attacks. Right side of face somewhat flattened out and complete ptosis of right eye. There was later difficulty in swallowing. This case was of the meningeal type. Death occurred early,—in two weeks.

Case 8, Mr. McA., age 44, reported by Dr. E. O. Harrold, Marion. This was an ambulatory case showing the classic features of asthenia, weakness, lassitude, mental sluggishness and lethargy. There was diplopia and moderate ptosis but no other localizing symptoms. The initial symptoms appeared early in March, 1922. He now complains of dullness of vision, constant drowsiness, immediate fatigue on moderate exertion or excitement, little initiative and less endurance. In a general way he appears well. Mental processes are slowed down. He has lack of interest, enthusiasm and concentration. He conducts his business but by forced effort. In his words, he feels like he had "a sack of cement on his head".

Case 9, Mr. T., age 16, reported by Dr. Frank Brown, Lafontaine, Indiana. This case had early naso-pharyngeal catarrhal symptoms. He thought he had "something the matter with the eyes" and before seeing his family physician consulted an oculist. The early general symptoms simulated typhoid fever. There was a little later, diplopia, ptosis and a lethargy lasting three weeks. There was general spasticity during three weeks. The convalescence extended over two months with complete recovery.

Case 10, Mr. T., age 18, reported by Dr. Brown, presented much the same characteristics as case 9, and came to complete recovery.

The following nine cases are at the Marion National Sanitorium. I was given access to these cases and their histories through the kindness of Dr. Wm. MacLake, medical director and superintendent. I wish to acknowledge also other courtesies extended by Drs. Gilfillan, Murray and Cook of the sanitorium staff.

May I digress for a moment to state that the Marion National Sanitorium accepts only mental and nervous cases occurring among soldiers of the Spanish-American and World wars. Ninety percent of its over 800 patients at present are World war veterans. The institution is complete in every facility, embracing all necessary laboratories, excellent well directed equipment for the therapeutic application of electricity, baths and vocational training. It has a capacity for 1,094 patients. The personnel of the staff embraces thirteen physicians, each a specialist in his line of work, and three dentists.

With these cases I mention but little of their history and describe somewhat briefly their present condition.

Case 11, Mr. K., age 33, dull, apathetic, mask-like expression, stands with stooping posture, head forward, arms and hands partially flexed; will sit for hours with hands on chair arms, seldom moving his head, will answer questions slowly—sometimes the effort to answer is attended with pursed, tremulous lips without any sound being made; all muscular action slow and difficult. He has a left partial hemiparesis, some spasticities and some coarse tremors.

Case 12, Mr. R., age 28, apathetic, weak, walks slowly with somewhat shuffling gait, words come slowly and monotonously, mask-like face, marked tremor of tongue and face, some stiffness of neck muscles, will lie on his bed most of the day if allowed to do so, is reasonably cheerful, waits on himself and helps with the work about the ward.

Case 13, Mr. R., age 32, always tired and exhausted, stands with head forward, fixed flexed elbows and hands, with hands against the thighs, dragging, difficult gait with short steps, great difficulty in turning, all movements stiff and awkward, some general spasticity, some difficulty in swallowing, tremor of the tongue, eyelids, hands and fingers, expressionless face, dull mentality.

Case 14, Mr. T., age 30, is an ambulatory case. He says that at times he is unable to open his mouth and cannot use his tongue well, unable at times to talk but knows what he wants to say, and is very nervous. He has a coarse, general tremor worse in the right arm and a static face when in repose.

Case 15, Mr. M., age 41, marked dullness and apathy, a decided slowness of physical and mental processes, speech labored and muffled, difficulty in swallowing, a slow spastic shuffling gait, general tremors, slight ptosis, diplopia for near objects, at times the mouth slightly open, corners retracted showing the teeth, usually an expressionless face. At one time I saw this patient holding a cup of coffee to his mouth with both hands, apparently rigid without any evidence of motion, and the whole appearance could well have been the form of a man carved out of inanimate material. He is volitionally practically a blank.

Case 16, Mr. M., age 22, has the staring, flat face, the attitude and gait of paralysis agitans, general hypertonicity, slow, hesitating speech. He will sit up all day unless told to go to bed, or will spend most of the day on the bed. He exhibits catatonic phenomena—cannot carry out suggestions such as putting on his coat or fastening his shoes. He will start the act and stop in the effort until urged to proceed.

Case 17, Mr. G., age 28, is another paralysis agitans type. He is listless, depressed, hypochondriacal, lies in bed many hours a day, eats slowly, difficulty in feeding himself, coarse tremors, speech usually retarded but sometimes free and clear. He says that the top of his head is pushing up.

Case 18, Mr. T., age 30, was in the Indiana National Guard from 1914, and in the World War one year, advancing to the grade of second lieutenant. He was mustered out in November, 1919. He later began work but was much depressed, felt worried, had pains in the back and legs and could not sleep. He worked until September, 1920, but irregularly on account of his physical condition, and none since. Before becoming helpless he could not stand erect or hold his head up in normal position. For the past twenty months he has been in bed helpless, lying on his back, with legs partly flexed, feet in partial extension, arms at his sides, hands across the chest, with flexed wrists and fingers. He cannot move, but if any movement is attempted it is attended by a marked tremor. He cannot talk, has great difficulty in swallowing and when taking his liquid food makes a continuous, pronounced moaning sound with a fear accent. His appearance suggests a general loss of flesh, but aside from this there are atrophic changes in one leg, with partial ankylosis. His face is without expression and he shows no interest in his environment. This is another case of the statue effect.

Case 19, Mr. C., age 27, presents the paralysis agitans attitude but without tremor—motion is very slow but smooth. In feeding himself the spoon travels from dish to mouth very slowly, the mouth is closed with extreme deliberation, mastication and swallowing being performed in the same manner. The face is blank, with the mouth slightly open. He answers questions promptly and intelligently but with very slow, measured speech.

These sanatorium cases are a most interesting group. All developed in the service or very shortly after, and this time element makes them more reliable as a basis for prognosis. This, however, is not promising. None of them as yet are showing any marked improvement, but at this time their residence at the sanatorium is of too short duration to know fully what may be expected from the well directed care and management they are receiving.

I have referred briefly in this presentation to 390 cases reported in medical journals, 10 cases occurring in the practice of Grant county physicians, and 9 cases in the Marion National Sanatorium—409 cases in all. A great diversity of clinical manifestation occurs, as might be expected when we keep in mind the area most involved in the pathology. There is the possibility of one case presenting practically the whole range of symptoms. There may be in any given case manifest involvement of only the oculo-motor area, with diplopia and moderate ptosis, or the manifestations may indicate an extension through the pons, giving rise to facial symptoms, or still farther downward into the medulla, giving rise to disturbances of mastication, swallowing, and disturbances of heart and respiratory rate, or the meninges or cortex may be so involved as to give rise to the predominant symptoms.

The one outstanding feature of practically all cases is a slowing down of both physical and mental activity. Muscles that are not paralyzed will respond to volitional impulses—but often with marked slowness and hesitation. The mentality is usually clear but hesitating and slow. Practically 50 percent of all cases present the paralysis agitans type of syndrome. The other 50 percent as a group will show physical and mental hebetude, with retarded response, lack of endurance, loss of initiative, interest and

power of concentration, localized or more general twitchings, choreiform movement, spasticities, localized or more general, pareses, partial or more marked, local or more general.

This latter group is in a way the more pitiable because of their likely greater mental alertness. They come to a realization of their serious condition and suffer from the consciousness of it. The first group no doubt suffer from a like consciousness of their condition. They are so often the picture of abject despondency.

In many of these cases there is a social and physical history which suggests a fundamental status out of which might develop some of the phenomena seen in convalescence and later. The dementia præcox symptoms, the extreme types of neurasthenia and psyscasthenia may more easily appear from excitation of a previous predisposition. This type of predisposition has been found in cases of shell shock and other calamitous experiences of soldiers on the firing line.

The various manifestations that occur in the acute stage, the stage of convalescence, or as true after-effects, are the logical outcome of a severe inflammation of nerve tissue. The damage is essentially interstitial. The nerve cells are not usually, in the earlier stages, directly affected. Repair fibrosis in nerve tissue is often progressive and this may contribute to the disastrous results. The after-effects in this disease are not always due to a loss of function of ganglionic centers but to an interference with the transmission of impulses.

Ultimate recovery in a large percentage of cases is questionable. It is yet too early to arrive at entirely satisfactory conclusions. We have ahead of us a period of study and collaboration. The convalescence is so protracted and the end results as far as observed are so persistent and intractable that our data will not carry the value we would like until another year or two.

THE THERAPY OF SYPHILIS*

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"Know syphilis in all its manifestations and relations, and all other things clinical will be added unto you," says Sir William Osler. In other words this disease has been said to be responsible for one-third of pathology, is the chief factor in organic disease of the nervous system, and one of the principal causes of insanity, being responsible for 12 percent of the 200,000 cases of insanity in the United States. Syphilis is often a factor in the etiology of epilepsy, diabetes, Bright's disease and cirrhosis of the liver, as well as a predisposing cause of cancer and tuberculosis. We are told that 10 percent of our male population has syphilis, congenital or acquired, and that 10 percent of the dermatoses are specific.

The discovery of the spirochete, the Wassermann test and salvarsan may be aptly called "the German syphilitic trinity". These discoveries have advanced our knowledge considerably; but, on the other hand, they have made clinical diagnosis, the highest attainment in medicine, take a back seat, with rather disastrous results, and we must view with concern the decadence in our ability to make clinical diagnosis, and the tendency to depend entirely upon the laboratory.

It would appear, for practical purposes, that there probably is no appreciable time during which a syphilitic infection can be regarded as confined to the focus of entry, but that immediately infection takes place the spirochetes begin to multiply and invade the surrounding tissues, gaining access to both the lymphatics and the blood stream, and are widely distributed over the body even before the initial lesion can be detected.

To combat this spirochete and thus prevent syphilis, we may consider the chemical and the constitutional methods. As to the former, the efficacy of calomel or other spirocheticides, in the so-called chemical prophylaxis of syphilis, is limited to a period of not more than eight hours after the spirochete has had the opportunity of invading the healthy person. Regarding the constitutional method, the German and French literature contain reports of the successful use of arsphenamine in the prophylaxis of syphilis. This procedure has been instituted in this country. The doses selected are small and administered prior to the appearance of the initial lesion in persons who are *definitely* known to have been exposed to syphilitic infection. The results of this prophylactic treatment are encouraging.

To assist us in the diagnosis of syphilis comes the Wassermann reaction, and of the many epoch-making discoveries in medicine, few outrank the Wassermann test in their significance and in their usefulness, especially when lesions of the viscera develop. This test is of great value in the diagnosis of obscure constitutional maladies. We would say, in matters of particular diagnosis, that the Wassermann test is a good servant but a bad master; a valuable aid, since it proves that the patient is suffering from syphilitic infection in some form or other, but a danger if taken to indicate that any and every lesion which can be seen on the patient is syphilitic. With all respect to the dark field illuminator in the primary lesions, and later the Wassermann test of blood and spinal fluid, too much emphasis cannot be laid on the fact that in many cases of syphilis, as in any disease, a diagnosis can be made, and must be made, by clinical signs and symptoms.

(*) Presented before the Section on Medicine of the Indiana State Medical Association at the Muncie session, September, 1922.

In the year 1910 salvarsan came on the market—a yellow powder, 31 percent of which is arsenic. Within a few years dozens of deaths were reported as being caused by salvarsan. A preparation of arsenic containing 20 percent, called neosalvarsan or neoarsphenamine, was marketed. One fact about the arsenical preparations must be borne in mind, namely, that they will render infectious lesions organism free in the course of a few hours; from a public health standpoint this is of the utmost importance. The injection of cloudy or turbid solutions of neoarsphenamine will almost invariably give rise to severe nitritoid symptoms in which syncope and shock-like collapse are the outstanding features. Neoarsphenamine should never be given unless the solution be perfectly clear. The more concentrated the solution the greater the danger. The effect of 0.45 grams of neoarsphenamine is magical when applied locally to a chancre, or intravenously. One dose 0.45 grams neoarsphenamine will in 24 hours cause the destruction of all accessible spirochetes in the body. Mercury may be given 10 days to equal an arsenical in this respect.

The histological findings in cases of death from neoarsphenamine shows the toxic effect to be chiefly exercised on the endothelium of capillaries. Chronic headache, loss of weight, which are occasionally displayed in the fifth and sixth doses of neoarsphenamine, are signs of intolerance and one should be on his guard. Exfoliative dermatitis is rare. Broncho-pneumonia may complicate and is particularly fatal. Jaundice is less frequent than dermatitis, and is very persistent. Severe cerebral symptoms characterized by intense headaches followed by mental confusion, epileptiform convulsions, coma, and in some cases death, have been recorded by a number of writers. They have become much less frequent recently, probably due to greater caution exercised as to initial dosage and care regarding the purity of solutions. Should a patient experience a bad result, he should be bled, take saline purgatives and bland liquids. Icthyol gr. V twice a day in capsules is indicated in pronounced dermatitis; also icthyol ointment 10 percent. Calamine lotion is a relief.

Hemorrhagic encephalitis may occur after injections of neoarsphenamine in any stage of syphilis, and in otherwise healthy subjects. It does not appear to depend on the dose. This condition is a grave one, and is usually fatal unless treatment is promptly administered as soon as the condition is recognized. This treatment consists in:

(1) Intramuscular injection of 1 to 1½ cc. of adrenalin 1 to 1000.

(2) Phlebotomy to 20 ounces.

(3) Lumbar puncture, with removal of 20 cc. cerebro-spinal fluid.

In syphilitic meningitis the headache may require aspirin or it may be so severe as to require opiates; although it usually will yield to some form of specific medication.

A hemiplegia occurring suddenly, with symptoms of apoplexy, should be treated with absolute rest, ice packs to the head and liquid diet. Massage, hydrotherapy and electricity may be used to advantage in treating the permanent paralysis.

Gummata of the brain may require treatment other than specific, according to the location, number and size, and the symptoms produced. Numerous investigators have practiced surgical procedures on brain gummata with more or less success. If a certain diagnosis of brain gumma has been made and it does not yield to specific treatment, and further, if the tumor is in an accessible position, surgery should be tried.

Many substitutes have been brought forward to supplant mercury, only to pass into oblivion, until now even in spite of the recent tremendous assault by arsphenamine, it still reigns supreme. The use of mercury in the treatment of syphilis enjoys an undisturbed position. In order to avoid gastro-intestinal derangements mercury should be given intramuscularly, for if given intravenously toxic conditions may arise. The beneficial effects of mercury internally are due to the actual destruction of the infecting organism by the mercury itself, as well as to the stimulation of the formation of anti-bodies. One grain of mercury is often sufficient to carry the patient seven days. The role of mercury in the combined treatment would appear to be rather that of an agent which can safely be retained in the tissues, and by which the effects of the arsenical preparations are maintained for long after the latter has been excreted. Neither can it be said syphilis can be cured by the arsenical preparations alone, but the negative reaction may result from the combined drugs.

When the kidneys are diseased it is necessary to watch the urine carefully to see that mercury, which has a great affinity for the cells of the kidneys, is not adding to the toxic effect of any arsenical preparation which may be used in combination, and, altogether, the regular examination of the urine is a necessary part of the syphilitic treatment. Wolffenstein, working under the A. M. A., in 1913 reviewed all the fatal therapeutic mercurial cases since 1883, and reported 108 in number. A certain risk accompanies the administration of mercury and arsphenamine simultaneously, so that for a continuous effect to be obtained, periods of mercurial treatments alone should alternate with periods of treatments with arsphenamine alone.

May we do honor to iodine? It is fairly certain iodine does not act on the spirochete, since in primary and secondary syphilis it does not

cause these parasites to disappear from the various lesions, nor does it influence the Wassermann. Iodine neutralizes the action of the agents, which prevents resolution and absorption of the diseased or necrotic tissue, and at the same time lays bare to the action of the real germicidal agent the infecting organism, which previously had been protected by necrotic tissue. With the exposure of the infecting organism, such agents as mercury and the arsenicals would be much more effective. Iodine absorbs newly formed connective tissue, upon which depends its virtue. Syphilitic tissue is connective tissue. In the early stages of syphilis such tissue encapsulates the spirochetes and therefore the latter are inaccessible to arsenic and mercury in the blood stream.

For ordinary syphilis the hot springs are comparatively valueless.

In early cases the spirochetes are many, widely disseminated and cause little or no tissue destruction. Organisms accessible to the specific drugs are destroyed and in favorable cases cures effected. In a large percentage of cases, however, the treatment is not carried out in an intensive fashion, and as a result the organisms persist in the viscera, cardio-vascular or nervous system, and slowly cause tissue reactions and degenerations.

It is a mistake to imagine that the treatment of syphilis consists only in the administration of a certain amount of salvarsan, mercury, intrimine and the iodides. To treat the disease successfully much more than this is required. In each case the individual morbid tendencies, both inherited and acquired, must receive careful attention. For instance if the patient is gouty, rheumatic or tubercular, these conditions, which probably will modify the course of the disease, must be treated, as well as the disease itself. In other words, it is necessary to treat the patient as well as the disease. Treatment should be individual and not routine.

In the therapy of this disease the drug intrimine is referred to above. Intrimine is a sulphur product, a reducing agent which prevents arsenic and mercury from exercising a toxic influence on nerve tissue. This drug is given intramuscularly in doses of 2 to 5 cc. If the syphilitic case is gotten before the stage of generalization, every effort should be made to rapidly sterilize the patient. If, as McDonagh has shown, neosalvarsan is combined with one or two doses of intrimine, the maximum amount of the arsenical will be taken up, and the maximum amount of protection for the nervous system will be secured.

During the stage of generalization, the ideal method of treatment may be otherwise, as here we should administer the arsenical in such a manner that its absorption may be slow, steady and gradual. The medicament will then be able to find its way to the intrathecal system, and it will not produce a sudden, general, complete systemic sterilization with consequent destruction of anti-body supply. Anti-body supply should be conserved over a long period of time. In stressing the importance of neoarsphenamine and mercury in the chemo-therapeutic attack on the treponema pallidum and the pathological formations caused by it, too frequently the physical condition of the patient and the toxic effects of the drugs upon him are forgotten. Proper hygienic treatment of the patient is necessary to stimulate his resistance and to assist the action of the drugs. The preliminary examination of the patient should include a study of all his organs and their functions, so that proper hygiene can be advised and tonics administered when needed.

In early cases the arsenical remedy, properly used, gives good hope of arresting the disease. In later stages the outlook is not so certain, but the treatment is almost always worth a trial.

In general the lesions of the central nervous system due to inflammation or exudation are much improved or eliminated by general treatment of patient. All methods of treatment fail in certain types of neurosyphilis because of the inability to reach the organisms in inaccessible localities, and because of secondary degenerations of tissue which cannot be restored. The treatment of neuro-recurrences which is almost unanimously advocated, is the prompt administration of arsphenamine or neoarsphenamine and mercury, and the happiest and most permanent results are obtained when the arsenical preparation is pushed to an extent far beyond what is usual in ordinary routine work. It is imperative to realize that neoarsphenamine, if given in sufficient amount, and over a proper period, can be the means of totally destroying the active agents, and of thus producing a cessation of the disease. On the other hand, an insufficient quantity may be the means of undermining the body resistance, so that the spirochetes present in the cerebro-spinal fluid may act as a greater irritant to the parts and tend to produce rather than retard neuro-recurrence.

Subsequent treatment depends upon the behavior of the Wassermann reaction, and no case should be considered as exempt from the necessity of further treatment until after it has been shown possible to obtain negative blood and spinal fluid reaction, and total absence of symptoms during consecutive periods of three, six and twelve months following the last treatment.

Although only about 20 percent of syphilitics develop neurosyphilis, when this percentage is computed on the syphilized population of a country it makes the question not only individual but one of the greatest importance to the state. The nature of the disease itself, with its insidious development, its onset during the prime of life, the loss of power to earn a livelihood, and the eventuality of the patient becoming a charge

of the state until a miserable death from paresis or tabes ensues, makes an early diagnosis, and early and efficient treatment, of the utmost importance.

In tabes dorsalis the clinical results following the use of the arsenicals intravenously have not been eminently satisfactory, and workers have been giving attention to the intraspinal treatment of this disease.

Actuated by the fact that the spinal fluid, as the result of the intravenous treatment with the arsenicals, contains little or no arsenic, Swift and Ellis instituted the intraspinous injections of arsphenamized serum, which aroused great attention, and since the publications of their investigations numerous workers have applied their method and it has stimulated others into devising similar procedures, so that today intraspinal and intracranial treatments have taken a permanent place in the treatment of syphilis of the nervous system. Paresis seems most resistant to this type of treatment which, from the location of the organisms, is to be expected, although some very encouraging results have been obtained in early cases of this disease.

The treatment of paresis, like the treatment of smallpox, should be preventive. In order that this may be accomplished the potential paretic must be recognized by his spinal fluid findings. Long before clinical evidence is at hand, the colloid gold test will give warning. If this is heeded, and appropriate treatment instituted, paresis may be prevented.

The results obtained in tabes by the combined arsenical and mercurial treatment are greatly superior to those accomplished by the administration of the arsenicals alone. Direct medication of the spinal fluid may well be restricted to the hands of experts, as a most unfortunate accident occurred in the Los Angeles County Hospital in March, 1914, when eight deaths followed the intraspinal injection of neoarsphenaminized serum. In contrast, however, to the almost brilliant results obtained by most investigators, Sachs, of Mt. Sinai Hospital, in 1916, states that the intraspinous therapy possesses no advantage over the intravenous and that the former method is of occasional and secondary value only. Since the institution of modern methods of treatment, the prognosis of tabes has become more hopeful, and even in cases of long standing may yield in a remarkable manner. It must be said, however, that those cases which are early recognized and show the greatest activity of the syphilitic process, that is, those with positive laboratory findings, are the most amenable to treatment. Cases in which marked degenerations have taken place cannot, of course, be restored to normal; but the process can be stopped and at least the subjective symptoms, the lightning pains and crises may be relieved. This in itself constitutes a distinct victory, as probably no suffering in all the field of human ills is more intense. When tabes has reached its final stage the treatment is no longer indicated, because it may aggravate the clinical picture.

All types of syphilis of the nervous system found in the acquired form may be seen in congenital syphilis, including syphilis of the nerves, arteritis, meningitis, cerebral and spinal gummata, as well as paresis and tabes, the treatment of which as outlined for the acquired form is largely indicated. The prognosis of involvement of the nervous system in congenital lues is more unfavorable than such involvement in the acquired form of the disease, and most cases lead to a fatal termination.

This disease is a common cause of nutritional disorders, arrested development, and malformations in the progeny. The best way to treat congenital syphilis is to treat the mother before the child is born.

In starting treatment in infants with florid syphilis, it has been found unwise to begin with full doses of the arsenicals. Theoretically, the ill effects are due to the sudden killing of large numbers of spirochetes, with resulting damage to the patient. Soluble mercury intramuscularly may be used the first few weeks, to be followed by the arsenicals in very small doses. A little later, larger doses may be given.

If syphilis is well treated in infancy, the number of syphilitic defectives will be so small as to be almost negligible. The family of every syphilitic patient should be examined, irrespective of the stage of the disease or the symptomatology presented by the patient when first seen. If this is done, cases of conjugal and congenital syphilis will be discovered which would otherwise be neglected. They will often be found at a period when symptoms are not active, and thus treatment may be instituted before irreparable destructive lesions have occurred. An opportunity is offered to prevent the development of such disabling conditions as general paresis, tabes dorsalis, aneurisms, and the like. The possibility of bearing healthy children may be thus increased. Syphilis in women is the worst of the evils caused by syphilis. Many mothers show no evidence of the disease until after the child-bearing period is over, and as often as not the Wassermann reaction during this period is negative.

Many physicians and dentists present extragenital chancres, and it must be borne in mind that the blood of all syphilitics is infectious, the congenital least so, the blood in primary and secondary stages being more capable of conveying the infection than that in the tertiary or latent stages.

In conclusion may we say that in the treatment of syphilis no single sign of improvement should be accepted as definite or final, and treatment should not be stopped at such indication.

Only cessation of all symptoms with the incidence of repeated negative blood and spinal fluid means a cure. However, a normal spinal fluid does not necessarily indicate a cure. In fact, neurosyphilis can exist in absence of spinal fluid finding even when untreated; but the spinal fluid should be interpreted with the symptoms and physical findings. Neoarsphenamine therapy is necessary since it controls infectivity and contagion. It yields quick results. Mercury is essential, but as a splint to our arsenic therapy, and as an aid to a permanent cure. Over-treatment is preferred to lack of treatment. One needs to review but a small proportion of the mass of present day literature on the treatment of syphilis to be convinced that mercury, not by the month, but by the year, and the arsenicals not by the dose, but by the half dozen of doses, must be given before any hope of a cure of syphilis can be held.

The advance made in the knowledge of syphilis during the last seventeen years finds no equal in the entire history of medicine.

Syphilis is no longer to be considered a genito-urinary disease, nor a dermatological disease, nor a disease belonging exclusively to any specialty; but it is to be thought of as a disease requiring knowledge in all fields of medicine. It is, however, the general practitioner or the genito-urinary specialist upon whom the burden of responsibility should rest, for one of these as a rule sees syphilis in the beginning, and if his work is well done, there should be no need for that of others in the majority of cases.

DISCUSSION

DR. CHARLES P. EMERSON (Indianapolis): The treatment of lues is such a huge subject that any discussion must apply to definitely limited points. Dr. Luzadder certainly sounds a timely warning in urging long-continued treatment and caution in prognosis.

May I relate an incident that occurred in 1908 or '09? I happened to be a guest in one of the hospitals where the first doses of salvarsan were administered. Quite a large group of doctors were present, all clothed in surgical gowns. The professor of medicine, who prepared the solution, and the professor of neurology, who assisted him, were clothed in white gowns, with surgical masks and gloves. They also had the permission of the patient's parents to give the injection. Everything ready, we marched down the corridor two by two to the patient's room. The professor held the syringe at arm's length in front of him and, looking at it, admiringly said: "Wonderful drug! One dose cures a case of syphilis." "Yes," said the neurologist, "wonderful drug! One dose kills every spirochete in the body." Three months later these same men had decided that it was wise to give a second dose; six months later all were giving three or four doses. After about two years, in addition to salvarsan, it was again our custom to give mercury and potassium iodid, not only in larger doses than previously, but for a third year. And recently Dr. Warthin said that he had never yet performed an autopsy on a syphilitic patient, no matter how well treated, but that he had found some active luetic process. All of this only shows that the treatment of syphilis is difficult and everlasting.

Although the work was not on human beings nor on spirochete infection, yet the work of Keyes and others has helped us to understand this problem. They showed that if an infection continues long enough the phagocytic cells designed to protect the body against this germ will not only kill these germs, but will harbor them and protect them against the other protective mechanisms of the body. If we get the case early enough, one dose of salvarsan may cure the patient; and long-standing cases can be checked, but can they ever be cured?

I do think that we sometimes treat too intensively; we should keep our patients in good condition. The problem is not so much intensive as it is everlasting treatment.

One point in connection with gumma of the brain is worth considering. If we are sure that one is present, we feel that the surgeon should do a decompressing operation, not to remove the gumma, but to relieve the pressure which alone, if allowed to continue long enough, will certainly do much damage. Then when our medication shall have removed the tumor we will not have a well but blind, etc., patient.

DR. WILLIAM S. EHRICH (Evansville): I would like to paraphrase the saying of one of my predecessors—that fractures are treated with splints and brains. I should like to say that syphilis is treated with drugs and brains. I know of no routine treatment that will cure syphilis. Each case must be treated as a law unto itself, in the same way as you treat other diseases, or you will not get results. For that reason I think syphilis is one of the poorest handled diseases, because men say they are going to give so many doses of mercury and so many of salvarsan; let the patient take a rest, and then make a Wassermann test. Some patients can stand much more mercury and arsenic than others, some need one drug and not the other, and each one should be treated as a case unto itself.

Of the laboratory aids, the most important is the discovery of the spirocheta pallida by dark field examination by India ink or any other method.

In no disease is the early diagnosis so important as in syphilis, for in the early stages, before the infection has reached the lymph supplied tissue, I think salvarsan will cure, and that it will cure no other type of case. I think the salvarsan does not reach the organisms after

they get into the lymph supplied tissues, but if the diagnosis can be made in the very early stages, it is curative.

I disagree with the doctor in that I invariably use mercury with salvarsan and have never had any unfortunate results. Since the beginning of treatment with arsenic I have always given it in conjunction with mercury because I knew mercury would cure syphilis. I did not know that arsenic would cure syphilis. Mercury makes the tissue an unfavorable culture medium for the growth of the spirochete. Salvarsan kills off all that it comes in contact with, consequently, if we kill those and have an unfavorable culture medium for the rest, it stands to reason that we have a better effect if we combine these two drugs. I have seen patients who have had twenty to thirty injections of salvarsan with a still positive reaction and after a few months a specific dermatosis.

PRESENT STATUS OF THE USE OF DRUGS IN HEART DISEASE

Paul D. White, Boston (*Journal A. M. A.*, Sept. 2, 1922), deals primarily with digitalis and quinidin. The use of digitalis, he asserts, is indicated in only two conditions: first, in heart failure of the congestive type, and second, in auricular fibrillation or auricular flutter with a rapid ventricular rate, whether or not failure is present. Digitalis is a toxic drug, and unless there is some clear indication for its use it should not be given. It is conceivable that it may sometimes do more harm than good. Its routine use in infectious disease, whether typhoid fever, influenza or pneumonia, and its routine use before or after operation are to be deplored. If auricular fibrillation or flutter or congestive failure should supervene in any of these conditions, it is possible, by large doses of digitalis administered by mouth or intravenously, quickly to combat the condition within a few hours at the most. Relatively rarely does such a need arise; therefore, there is no reason for afflicting everybody with a poisonous drug when only now and then it may be needed. Even in emergency, digitalis is often given when it is not indicated. The particularly remarkable reputation of digitalis is due mainly to its dramatic effect in auricular fibrillation. Digitalis acts not only as a stimulant in increasing the degree of systolic contraction in auricular fibrillation as well as in normal rhythm, but also by its sedative action on the heart, it improves the circulation far more effectively in auricular fibrillation than in normal rhythm. In auricular fibrillation, the conduction system is particularly susceptible to the effect of digitalis, and it is in this condition that a rapid reduction of ventricular rate of 20, 40, 60 or even 80 or 100 beats a minute may bring such relief to the heart. The saving of 100 beats a minute for the heart (most of them ineffective anyway in supporting the circulation) means the saving of more than 100,000 contractions a day. This means an astonishing rest for the myocardium in the course of hours and days. Given a leaf of proper potency as determined physiologically, it matters little or not at all whether it is administered in pill form as powdered leaf, by tincture or infusion, though the last, if made according to the U. S. Pharmacopeia directions, will be too weak. Usually not enough digitalis is taken. If there is urgent need for its use, it should be given in sufficient dosage to saturate the system in forty-eight hours or less. Eggleston has suggested 0.15 gm. of the leaf or (1½ cat units) for every 10 pounds in weight. One-half of this amount may be given at once and another quarter after six hours, an eight more in six hours, and so on until saturation is evidenced by toxic symptoms, by marked reduction in ventricular rate or by the production of a coupled pulse. White has found that the amount figured out for a satisfactory saturation may be sometimes 0.1 grain of the standardized leaf rather than 0.15 gm., which in some cases may result in disagreeable toxic symptoms. Also this dosage may be spread through two days more evenly, that is, by giving one-sixth of the dose three times a day for two days. Quinidin sulphate is indicated particularly in the treatment of auricular fibrillation of recent origin, preferably of less than six months' duration, when heart failure has not been, or is not, an important feature, and in the prevention of paroxysmal auricular fibrillation. Chronic heart disease, especially with chronic mitral stenosis and auricular fibrillation more than a year old, is, in general, a contraindication. Heart failure also seems to be a contraindication to the use of quinidin. In twenty-seven cases of auricular fibrillation of less than six months' duration, twenty-two hearts, or 81 percent, were restored to normal rhythm, and fifteen, or 56 percent, maintained normal rhythm. In twenty-three cases of auricular fibrillation of more than two years' duration, eleven hearts, or 48 percent., were restored to normal, but only three, or 13 percent, maintained normal rhythm. In forty-eight cases of congestive failure, thirty-two hearts, or 67 percent, were restored to normal, but only eleven, or 23 percent, maintained normal rhythm, while in twenty-seven cases in which failure did not occur, nineteen hearts, or 70 percent, regained normal rhythm, and fifteen, or 56 percent, retained it. Seven of a group of nine patients with paroxysmal auricular fibrillation (and flutter) have been much benefited because of the marked reduction or abolition of the attacks by quinidin. In other cardiac disturbances, such as premature beats, heart block and paroxysmal

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EDITORIALS

MISPLACED MEDICAL CHARITY

As an evidence of how medical men are imposed upon through the operation of various uplift schemes, mostly sponsored by ambitious women who have neither home nor family ties, we cite the following instances:

A Young Women's Christian Association organized a gymnasium class "for business women", and the originators seemed quite perturbed because a regular physician refused to give gratuitous services in making complete physical examinations for those who desired to enter the gymnasium classes. It should be understood that these business women are all in comfortable circumstances and earn good salaries. Presumably they pay a tuition fee for the gymnasium classes, and there is no earthly reason why a sufficient sum should not be added to the tuition in order to provide a respectable fee for thorough physical examination at the hands of a reputable physician.

In another instance a woman uplifter whose husband regularly employs a man for skilled work actually made arrangements with a surgeon to do a gratuitous operation upon members of the employee's family on the ground that the employee was poor and unable to pay a fee. Without presuming to criticize the female uplifter because her husband failed to pay his employee a suitable wage, yet the fact remains that the employee resented the implied charge that he was deserving of charity and insisted upon paying a modest fee for surgical services rendered.

These are but examples of almost daily occurrences in the lives of busy physicians, and indicate the extent to which charity of one kind or another is unnecessarily bestowed, with the result of pauperizing that large element in society that is perfectly willing to be pauperized or be relieved of any responsibility. Many women who live in hotels or boarding houses and have no responsibilities other than the care of a poodle dog and an occasional soft word for a hard working husband because of the pecuniary recompense that it may bring forth, seem to think that it is a duty they owe to society, even though self-advertisement is the motive, to engage in uplift work of one kind or another. These women are not satisfied to take up with the established social agencies, largely because they can't be "the big toad in the puddle", so they start uplift schemes of their own, with the avowed intention of getting such glory as they can out of the enterprise. It does not make any difference whether there is a crying need for these uplift efforts or not, as long as the activities furnish a medium for self-advertisement and can be labeled "a very worthy object".

The public-spirited citizen is bled for all these uplift schemes, but in view of the fact that so many of these same schemes require the active services of members of the medical profession, whether by way of making physical examinations of one kind or another or in furnishing gratuitous medical or surgical attention, it is apparent that in the final analysis it means a rank imposition upon charitably disposed doctors, and, worse than all that, it means the pauperizing of the community through the bestowal of misplaced and unneeded charity. We confess that it is a little difficult for the doctor to turn down his patient, Mrs. Fatty Limousine, the wife of the banker, when she asks that a gratuitous operation be performed upon the member of the family of a plumber or a coal miner who is pulling down more actual money in a month than the doctor makes in six months, but some means should be adopted whereby this growing imposition can be stopped. It is an imposition not alone upon medical men and others who contribute of services or means, but it is an imposition upon the public because we are creating a dependent class of individuals who shirk responsibility and who grow in the belief that the world owes them a living without turning a hand toward their own economic improvement.

The plan adopted by some medical societies of making it necessary to refer every call for gratuitous medical services for an unbiased and unprejudiced investigation is perhaps one of the best ways to solve the problem. Another way is to insist upon having the recognized charitable organizations of the community give a report upon the propriety of giving gratuitous services. Finally, medical men or medical societies should say to the uplifters, "The services will be rendered for a fee consistent with the ability of the patient to pay, no matter how little the fee may be", and to show that the medical profession is not sordid in making this proposition the offer should be made to turn the fees over to the uplift society if the cases referred really belong within the scope of uplift work.

THE NURSING PROBLEM

The nurses again are agitating the subject of increased compensation and a lessening of hours and duties. Practically all of them now charge and receive from thirty-five to fifty dollars per week together with their keeping, and most of them not only are trying to limit the time on duty to eight hours but insist that relay nurses be employed when cases require constant attention. Aside from this many of the nurses refuse to take anything but the easiest cases or those which may be called "snaps", such as clean surgical cases requiring little or no dressings. Then a certain percentage of the nurses refuse to take cases in private residences and insist upon having nothing but hospital cases. Furthermore, even the nurses in training are getting to the point where they give nothing but the most superficial care to cases, so that in reality a patient in a hospital, even though he ought to get along exceedingly well with nothing but the care of the floor nurses, is compelled to have a special nurse if anything more than the most ordinary attention is required. An analysis of the situation shows that no one but a person with means can afford to have a nurse, and in many hospitals all patients suffer as a result of the superficial attention given.

We have no fault to find with the highly trained nurse who demands and receives high wages for her services from those able to pay, and who is able to limit the hours of work, but we do say that there is a crying need for thousands of real nurses who will take care of the average sick, and especially the people in poor or even moderate circumstances who need ordinary nursing care and of necessity can pay only modest compensation for the same. We confess to having been in sympathy with the various efforts to raise the standard of nursing, but we find that in raising the standard of nursing we also have made it possible for the creation of an arrogant, overbearing and wholly unsympathetic class of women who for the most part are looking not at the humanitarian side of their work but for the greatest remuneration obtainable at the least expense of effort. As a matter of fact people in moderate circumstances no longer can afford to have a nurse. They are able to secure the very best medical and surgical services at fees that are in keeping with the ability of the patient to pay, but when it comes to having a nurse the story is quite different. It is for this class which make up the bulk of those who are sick that we need thousands of good practical nurses, not the highly trained, cold blooded registered nurses with their exaggerated ideas of their attainments, importance and value of their services, but the nurse who can give ordinary nursing care, and who possesses enough of the milk of human kindness to make her sympathetic and helpful in caring for the sick.

DUES AND THEIR USES

A member of the House of Delegates at the Muncie Session suggested that the dues of the Indiana State Medical Association should be reduced, which suggestion very properly met with no favorable action.

In this connection it may be well to consider seriously what the dues are for. Naturally the first thing for which dues are necessary is the running expenses of the Association. This includes the honorarium to the Secretary, the actual expenses of the councilors, the expense of annual sessions, and that part of the cost of publishing THE JOURNAL which is not covered by the advertising income. These expenses are well taken care of by the present dues. However, there are other expenses incurred in carrying on enterprises that are of direct or indirect benefit to the Association and the individual members thereof which deserve the sanction and support of every member.

A few years ago we established a medico-legal defense fund, and at present that fund has in its treasury the limit fixed by the Association as the amount beyond which no further accumulation would be permitted. Both last year and this year the medico-legal defense assessment was turned back into the general treasury. Then we have the expense of various committees, and that includes the expense of the very valuable and efficient work done by the Committee on Public Policy and Legislation. As a matter of fact that committee should have been given ten times the amount expended, provided the work which the committee should do is carried out effectually.

At the Muncie session we provided for an educational committee, with the former Secretary of the State Board of Health, Dr. John N. Hurty, at its head. This educational committee will do a work that should have been done years ago, namely, acquaint the public with the aims and objects of the regular medical profession, the necessity for maintaining high standards for medical education and licensure, and point out the inconsistencies and absurdities of some of the teachings of the pseudo-medical cults, charlatans and quacks which have been growing as a direct result of propaganda that no one has attempted to controvert. It is recognized that we owe something to the public as well as to ourselves, and this being the case we should help to protect the public from the dangers of unscientific medicine and quackery. On the other hand, we owe it to ourselves to protect our position as educated and qualified

physicians, and to prevent, if possible, either legislation or public opinion which in any way discredits the knowledge and experience acquired through long and intelligent effort and great expense.

Every member of the Indiana State Medical Association should contribute his share to these various undertakings, and he ought not offer any objections to annual dues of even ten times what is paid at the present time, as long as he knows that the money is to be expended judiciously and well. Incidentally it may be noted that the very things we are trying to combat are brought about by the active work and the propaganda of the pseudo-medical cults, which cults have spent one hundred dollars to our one in spreading information that is based upon neither facts nor reason. Much of this propaganda has been in direct opposition to the medical profession and to the high ethical, scientific and educational standards that we maintain. As a direct result of this widespread effort on the part of these pseudo-medical cults we stand to lose our prestige and standing, and the public, the one most concerned, to innocently suffer from the effects of ignorance and quackery. Had we turned our hand to the work of defending our position and discrediting the teachings of the pseudo-medical cults we would not now be floundering in the sea of uncertainty as to what the final outcome will be, and it would not be necessary to put forth such Herculean efforts as now will be necessary in order to put the public in possession of the facts. Therefore, our educational committee, with Dr. Hurty at its head, should and will do a work of inestimable value, but to do this will cost money, and the money must come from the regular medical profession. The reserve now on hand in the Indiana State Medical Association treasury should be employed to further the purposes outlined, and every member of the Association should be willing not only to pay the dues that are assessed at present but double or triple the amount if deemed necessary in order to carry on the contemplated work to the fullest extent.

FEES PAID BY INSURANCE COMPANIES FOR MEDICAL EXAMINATIONS

The Postal Life Insurance Company boasts of low expenses in doing business and feels rather proud of the fact that it is able to cut out the expense of agents. It might with equal propriety boast that it gets its medical services at a low rate, but in doing so it would be claiming nothing more than can be claimed by all the other life insurance companies, for not one of them pays a fee for medical services that is at all in keeping with the value of the services rendered. As a matter of fact, the key to the success of a life insurance company, so far as concerns the acceptance of risks and keeping losses at a minimum, depends entirely upon medical examinations. Careful examinations by competent medical men mean the elimination of many risks and losses, and the examiner, if he does conscientious and skillful work, is deserving of adequate compensation. The Postal Life Insurance Company, following the lead of some other insurance companies, has established a "health bureau", and policyholders are asked to take advantage of it by appearing before medical examiners for a physical examination to determine the condition of the health and the possibility of the existence of any abnormal or diseased condition requiring the attention of a physician in order to prolong life and health. The policyholders are requested to report to a physician for what the company says is a "brief physical examination". However, the Postal Life Insurance Company, with the astuteness that is born of long experience in the insurance field, asks the examiner to make a report, which, if filled out intelligently and conscientiously, would require an exhaustive physical examination which if done properly would require at least an hour or more of the examiner's time, to say nothing of the time required to fill in the blank, which covers questions concerning practically every function possessed by the policyholder. For this "brief physical examination" the company tenders the examiner the munificent sum of two dollars. Presumably as a bait to make the examiner think that he isn't doing so much, he is not required to make a urinalysis but is expected to send the sample of urine to the company at the home office in New York. If all the questions concerning the policyholder's physical condition are answered intelligently, as based upon a careful examination, the fee for the services is ridiculously low. On the other hand, if the questions are answered without a careful examination having been made, then the examiner is guilty of dishonesty. In either event someone is bound to get the worst of the deal, and the company is shrewd enough to consider the average doctor honest enough to make a thorough examination no matter what remuneration is received.

The whole thing shows to what extent imposition is practiced upon members of the medical profession by life insurance companies. The principle of trade unionism is absolutely correct insofar as it protects the honest worker and works no injustice to the employer. The principle of trade unionism should be adopted by the medical profession in its dealings with insurance companies of every description, and, in fact, in the rendering of medical and surgical services to any but those deserving of charity. It is the height of folly to argue that doctors must continue to be the only followers of any vocation of whatsoever kind that are not protected in the question of remuneration for services rendered. We are imposed upon by insurance companies because we tolerate it without

a whimper and because we apparently like it. The insurance companies, always on the lookout for saving money except when it comes to the payment of salaries of their officers, take advantage of spineless doctors because it can be done. If the American Medical Association, backed by its 89,000 members, would say to the insurance companies that a ten or twenty dollar fee is a fair and just fee for such an examination as required by old line life insurance companies, and that no member of the Association would make an examination for any less remuneration, the life insurance companies would pay the demanded fee without a word of protest and the cost of life insurance would not be increased a penny. In fact it is a question if a better grade of service could not be secured by the companies through discrimination in the appointment of examiners, and with better examinations there would be an improvement in the risks accepted, a diminution in losses, and a corresponding lessening in the cost of insurance. The question is, how long will the medical profession continue to be unorganized when it comes to looking out for the purely economic welfare of its members?

EDITORIAL NOTES

DEAR DOCTOR:

THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc.; which you may need in your home, office, sanitarium or hospital.

We invite and urge you to use this Service.

It is absolutely FREE to you.

The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.

Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.

Whenever possible, the goods will be advertised in our pages: but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.

We want THE JOURNAL to serve YOU.

PAY your State Association dues and pay them now! Don't wait to be urged by the Secretary and don't procrastinate until you are notified that you are delinquent.

DR. G. W. H. KEMPER, an ex-president and for many years the historian of the Indiana State Medical Association, attended the Muncie session of the Association. He now resides in California and it is very evident that the salubrious climate of his new home agrees with him, as he seems to be young physically and mentally in spite of his advanced age. He was warmly welcomed by his old friends and it is hoped that he will be able to attend many future sessions of the Association.

THE quacks and charlatans usually are found on the front seats of our churches. They put their silver in the contribution box with a loud clatter so as to attract attention, and they pray the loudest at the Wednesday nigh prayer meeting. Strange, but true, these chaps usually have the ear of the pastor, who does not hesitate to recommend them to the gullible portion of his congregation. Is it any wonder that reputable and competent doctors are somewhat nauseated and are not very keen about their affiliation with the church?

THE Indiana State Medical Association should consider itself fortunate in securing the services of Dr. Hurty as chairman of its educational committee and a field worker in the interest of higher ideals and practices in the medical profession. Had he not been financially independent and willing to engage in a work for the love of it and because it represents a principle he desires to uphold, he would not accept the position for compensation that is a half to two-thirds less than he has been offered by numerous industrial concerns that have sought his services.

THE Federal prohibition agents are beginning wholesale prosecutions of doctors who misuse prescriptions for alcoholic beverages. This probably is of little interest to Indiana doctors who are not permitted to write prescriptions for alcoholic beverages, but it indicates the determination on the part of the government to enforce the Volstead Act to the letter. As before stated in the columns of THE JOURNAL, we are not in sympathy with the sentiment which put over the Volstead Act, but we do believe that doctors should be in better business than acting as bootleggers or assistants in procuring liquor by illicit means.

IT is the generally accepted opinion of lay persons that the bite of the tarantula is fatal or at least very serious. Just why this opinion prevails is hard to understand, inasmuch as no trustworthy records concerning the toxicity of the tarantula bite are obtainable. Recently W. J. Burg, of the University of Arkansas, has subjected both animals and men to attack by the fangs of active tarantulas and he reports that the results are put in the category of bee stings in severity and no more menacing or dangerous than the ordinary bee sting. This would seem to prove that the danger from the bite of the tarantula has been very greatly exaggerated.

THE chiropractors believe in advertising, and they are finding some lay periodicals of national circulation that will accept their advertising. Thus *Life*, always violently opposed to rational scientific medicine and a sponsor for all of the "antis" including the anti-vivisectionists and the

anti-vaccinationists, is quite willing to boost chiropractic with all of its fallacies and inconsistencies. However, practically all of the best weekly and monthly lay periodicals refuse to accept medical advertising of any description, well knowing that when such advertising is offered to them it usually comes from quacks and charlatans rather than from reputable medical men. With *Life* it is different.

SOME doctors have gone "nutty" over the subject of vitamines and, profiting by the public interest created by medical agitation of the subject, unscrupulous manufacturers are capitalizing the vitamine demand by putting out commercial vitamines, advertised as possessing unusual therapeutic properties. The advertising matter follows closely the trend of patent medicine advertising in which a large number of diseased conditions are referred to as being cured by vitamines. The public should be informed that concentrated vitamines are unobtainable, and the commercial product should not be substituted for fresh vegetable foods which are in general very rich in vitamines.

THOSE doctors who are interested in spreading the gospel of truth concerning medical fads and fallacies should get in touch with the Propaganda Department of the American Medical Association. Two volumes on "Nostrums and Quackery" published by the A. M. A. comprise a veritable encyclopedia on the subject. In addition to this the Association publishes a large number of pamphlets dealing with various phases of the patent medicine evil and quackery. In brief, the Propaganda Department of the A. M. A. is a clearing house for information on the nostrum evil, quackery and allied subjects. It not only deserves the support of the medical profession but the department should be utilized to the fullest extent in educating the public.

THE sensational trial at South Bend, in which a married woman attempted to prove parentage of her child, brought forth considerable newspaper comment concerning the possibility of determining parentage by blood tests. A San Francisco physician (Abrams) who has been more or less in the limelight and is considered by some as a faker, was offered as about the only one in this country who could determine with certainty the parentage of a child by tests that he is supposed to have either originated or improved upon. In commenting upon this subject the *Journal of the A. M. A.*, October 7, 1922, after discussing the precipitin test, which is used generally to determine the nature of blood stains for medico-legal purposes, and other methods of recognizing variations in human blood, concludes as follows: "The conclusion is that at present science knows of no blood test by which parentage can be determined."

THE *Boston Medical and Surgical Journal* calls for some constructive action from the American Medical Association. Our law makers really desire information relating to benefits and dangers of measures presented as well as political effects of their decisions. They are entitled to respect insofar as they are honest servants of the people, but they should not be left without all pertinent information. The American Medical Association could present the highest type of information in all matters relating to public health and the maintenance of efficient public health service, and to this end should establish a committee composed of representatives from all of the states. This body should be paid a reasonable compensation for time given and should study proposed legislation, decide upon a course of action, and with the dignity and power of the Association behind it, tell Congress what should or should not be done.

As diphtheria seems to be more prevalent during the winter months it may not be amiss to call attention again to the results of active immunization with diphtheria toxin-antitoxin. Three doses of toxin-antitoxin, each from 1 to 1.5 c.c. injected a week apart, should be administered. A longer interval between the injections, probably two weeks, may be found to be of advantage in producing a better immunity. At least six months should be allowed to elapse between the injections of toxin-antitoxin and the Schick retest to determine the development of an active immunization. A second series of two or three injections of toxin-antitoxin should be given to those who have not become immune after the first series. There are a few people who are difficult to immunize with toxin-antitoxin, even when they are given several series of injections. There is practically no danger from anaphylaxis, either in repeating the injections of toxin-antitoxin or in giving toxin-antitoxin as a preliminary to injection of antitoxin.

IN the scheme of organization of the chiropractors is a plan for providing medico-legal defense, and in Fort Wayne a company has been formed for defending chiropractors in malpractice suits. It will be interesting to know just how they will succeed in protecting chiropractors when the courts are called upon to decide upon the fitness of chiropractors to practice upon the sick and suffering. At present they are law breakers, which in itself puts them beyond the pale of protection by law for their acts, and it will be interesting to note whether the courts will sustain them in their radical and inconsistent claims concerning the cause and treatment of many diseases the nature of which has been known and recognized by scientists for many years. As a matter of fact we would like to see a few malpractice suits

for the purpose of showing up the inconsistency and ignorance of these pretenders. It is only when the public really becomes interested in suppressing imposition that chiropractic will be suppressed.

AT a recent meeting of the Kosciusko County Medical Society a resolution was passed recommending that House Bill No. 267, introduced at the last session of the legislature, be reintroduced in the coming session of the legislature and that an amendment be added to the bill to read as follows: "For the purpose of enforcing the provisions of this Act it is hereby made the duty of the Judges of the several Circuit and Superior Courts in this State, and they are hereby expressly granted power so to do, on proper showing made that any person in said State is practicing medicine without a license as defined herein, to grant temporary and permanent injunctions restraining and enjoining such persons from continuing so to practice medicine in this State until such person or persons have complied with the provisions herein provided."

The object of this amendment is to enjoin anyone from practicing medicine until he has complied with all laws pertaining to licensure.

No matter what caused his defeat, let us be thankful that Nathaniel C. Ross, president of the Ross Chiropractic College of Fort Wayne, and aspirant for a second term in the Indiana legislature, failed to secure re-election. In the last session of the Indiana legislature he was the author and principal defender of the chiropractic bill which failed of passage, and it is a well-known fact that the only reason why he desired to become a member of the legislature was for the one purpose of obtaining legislation favorable to the chiropractors. In reality we are a little surprised that he was defeated, for no candidate ever had as many satellites working for him night and day. The chiropractors, the chiropractic students and their intimate friends, probably numbering several hundred, worked long and ardently for their leader, and there is no doubt that such politics usually brings about victory if there is little opposition on the other side, and in reality the regular medical profession scarcely turned a hand to defeat Ross. Anyway, we may feel that the wings of Ross have been clipped, and while he probably will camp at the next Indiana legislature "with bells on", yet he will not have the same influence as he would have had he succeeded in being elected.

ACCORDING to newspaper reports, Professor Lorenz is back in this country again and this time to remain permanently. As a matter of fact he has found America to be a very hospitable place. The lay press has heralded him as the world's greatest orthopedic surgeon, and in order to place himself upon a firm basis with the American people and to secure the most flattering advertisement through the public press, he started what was supposed to be some charity work for the crippled children of America on the plea that he wanted to pay the debt that Austria owed to the American people. While doing this charity work he profited by the advertising and managed to see a sufficient number of private cases to insure him a very handsome income. With his introduction to the public through the lay press and the acquisition of a lucrative practice in consequence, he finally concludes to locate in America. We haven't the slightest objection to Professor Lorenz' decision to come to this country to make his home and practice his profession, but we feel that he is coming under false colors just as he started his charity work under false colors. The medical profession of the country has been criticized severely because it did not welcome Professor Lorenz and sanction his conduct in coming here a few months ago to do surgical work, but events prove that it is wise to withhold approval when motives and actions are open to suspicion.

IN all probability many harmful effects caused by the indiscriminate use of laxatives and purgatives through self medication on the part of the laity escapes the attention of medical men. The *Journal of the A. M. A.* has called attention to phenothalein dermatitis, and the distinct concentration of the blood caused by Epsom, Rochelle, and Glauber's salts, whereas no such effects attend the laxative use of castor oil or cascara sagrada as representatives of vegetable purgatives. It is quite conceivable that undue concentration of the blood from any cause may lead to distressing symptoms and, accordingly, care should be exercised in the administration of purgatives in diseased conditions, especially in those states known to be responsible for concentrated blood. Pharmacologists have pointed out that salines in dilute solutions are more serviceable than salines in concentrated solutions as ordinarily used. The advantages which natural mineral waters have over the solutions of purgative solutions as usually employed is that they are very dilute and the patient is thus required to consume a fairly large amount of water with them. However, this advantage may be secured by proper dilution of purgative solutions, with the attending saving of expense over that required for the use of the natural mineral waters. Aside from this the drinking of a large quantity of water in connection with the salines very largely offsets the tendency to concentration of the blood that otherwise occurs.

IT seems to be perfectly natural for the world to attempt to fasten crime upon a suspect, even though the suspect may be perfectly innocent. Who of us if suspected of crime, even though

perfectly innocent, could stand the grilling repeatedly and for hours at a time by policemen, detectives, and newspaper reporters who analyze every action, facial expression and answer, not with a view to gaining the truth but to obtain some evidence that will enable them to fasten the crime upon a suspect. Few human beings are able to go through such an ordeal and not become confused and under the nervous strain contradict themselves in minor points, all of which is seized upon by the merciless inquisitors as spelling guilt. Perhaps this sort of thing has been the means of unearthing the perpetrators of crime in some instances, but often it places a perfectly innocent person before the bars of justice. To our notion there ought to be some provision in law to protect anyone, guilty or innocent, from the needless and brutal inquisition that all too frequently occurs in connection with criminal cases. For the protection of society, all reasonable and consistent methods of detecting crime should be adopted, but this idea of permitting the hit-and-miss inquisitorial work on the part of pseudo-detectives, newspaper reporters and even policemen, is all wrong and all too frequently becomes a grave injustice to perfectly innocent people. The numerous episodes in connection with efforts to discover the murderer of the New Jersey minister and his choir leader is a case in point.

EVENTUALLY the public will get wise to the inconsistency of permitting the quacks and incompetents to prey upon the sick and suffering without let or hindrance. The chiropractors have been gloating over the fact that in most states they have been unmolested, and in a few states attempts have been made to have the sect recognized legally. In New York State a bill which would recognize the chiropractors as competent to treat the sick and suffering was presented, and when it was before the governor for signature the *New York Tribune*, recognized as expressing sound and conservative views, had the following to say: "The public has not followed the details of the debate over the chiropractic bill now before the Governor for signature. Nor is it necessary to do so. To arrive at a judgment it is enough to know that on one side are the advocates of quackery and on the other those who would suppress quackery. The issue is the simple one of whether fraud is to be encouraged or discouraged. The quack, though he often changes his masquerade, is a member of an ancient profession. Knowing human aversion to pain and human gullibility, he exploits his fellow creatures by selling a cure-all. When men believed in evil spirits he marketed incantations; when medicaments came into use his herbs were sure cures, and in these later days he specialized on psychology, or laying on of hands, or blue glass, or cold water, or bone manipulation. Though his prescriptions are altered to meet new conditions, he always has a panacea to dangle before the credulous."

THAT old warhorse, Dr. John N. Hurty, for more than a quarter of a century the able and aggressive secretary of the Indiana State Board of Health, has been elected a member of the Indiana legislature. The good people of Indiana, including the medical profession in particular, can be thankful that such a clear-headed and forceful character will represent them in shaping legislation that will either make or mar conditions pertaining to public health, sanitation, medical education, and medical licensure, to say nothing of being on the right side of every question that has to do with the welfare of the good people of Indiana. Incidentally it may be remarked that previous to the election, Dr. Hurty, over his own signature, stated that if elected to the legislature he would stand steadfast and true for all medical measures approved by the legislative committee of the Indiana State Medical Association, and stand strong against any measures which the Association is against. In passing, it may be stated that the report gained credence that Dr. Hurty, in deference to some of the women's clubs, had become an avowed advocate of the Shepherd-Towner Act. As a matter of fact he, like practically all members of the Indiana State Medical Association, is opposed to the Shepherd-Towner Act and all other acts of like character. He also is opposed to the act which appropriated large sums of money to the states for the purpose of fighting venereal disease. Both violate the same principle. In reality, Dr. Hurty will stand for those things which will make better citizens, and Indiana a better place in which to live. In doing this he will not be influenced by any maudlin sympathy, or by any desire to profit through preferment.

SOME doctors think that a government position is a "snap". In a sense it is, for most government officers loaf on the job and do not render enough actual service to entitle them to even the pay that they receive. In due course of time a government employee gets so used to putting in short and easy hours, and calling it a day, that he can't work like others who are occupying jobs that require service and perhaps competition. Now comes an act of Congress which makes it necessary for the retirement or discharge of a number of professional men, among which are many medical men. The officers to be retired or discharged have served the government for a long period of years, some of them twenty years or more. This means that a government position is not a "snap" and may be lost at any time, but it also means that those men who have been in the service for many years are very apt to be out of a job for a long time to come, as they are fitted for nothing

but the service in which they have been engaged. They probably will be utter failures in private practice, and we doubt if there are any commercial or industrial enterprises that will be willing to give them employment or could give them employment on the basis upon which they worked for the government. Now and then a man who naturally is energetic and ambitious may succeed either in working up a place for himself or in filling a place that is offered him, but in the main these government employees are going to find it tough sledding to get along, and all because our government, with its recognized tolerance of slothfulness and oftentimes incompetency, has permitted these men through years of service to acquire habits that are not in keeping with the highest efficiency demanded in civil life.

WE hear much about the impropriety of attempts to organize the medical profession to protect its economic standing, but it is about time for medical men to wake up and realize the importance of organization if they desire to save themselves from ruin. It sounds very nice to talk about humanitarian motives being the only guide in the practice of medicine but it should be remembered that doctors require roofs over their heads, clothing to cover their nakedness, and food to fill their empty stomachs, and nothing will bring forth these purely physical wants but the return of "filthy lucre" for services rendered. In Europe the medical profession has been reduced almost to pauperism, and all through lack of organization. If the doctors used half the business sense that is employed by the plumbers, printers, carpenters, brick masons or those following almost any other vocation in life, there would be no such thing as doctors making calls for ten and twenty cents each, as they do in England, and subject to penalty if anything more is charged. Is it any wonder that some of these doctors are taking up trades in order to earn even a comfortable livelihood? As a matter of fact medical men are the most gullible on earth, to say nothing of being the most apathetic concerning things that concern their own welfare. Self-preservation may be the first law of nature but it seemingly is not considered by the medical man, and sooner than he expects the average doctor will find himself virtually out of a job as a direct result of permitting the world to walk over him without protest. The only way to stem the tide of destruction is to organize the medical profession, and stick together in demands for those things which pertain to the economic independence of medical men.

IN the final passage of the tariff bill, the Senate reversed its position on the importation of dyes and synthetic medicines, and placed extremely high duties on all such articles. This action of the Senate is in accord with the position taken in THE JOURNAL in its editorial announcement of August 12, in behalf of American-made synthetic chemicals for medical purposes. There was read to the Senate a letter from Secretary of War John W. Weeks urging that the American dye industry and synthetic medicine industry be protected in the interest of national defense and public health. While the Senate did not vote that there should be an embargo on these products, the tariff duties are of such nature that they will in effect be a conservative check on the importation of dyes and synthetic medicines derived therefrom. The new duties are based on American instead of foreign valuation. They fix the duty on coal-tar dye intermediates at 10.5 cents a pound and an additional 75 percent ad valorem, and on finished dyes and coal-tar products 90 percent, ad valorem. In urging the adoption by the Senate of these rates, Senator Wadsworth of New York showed that England, France and Italy have placed an embargo against the importation of dyestuffs. He said that as a people we have paid little attention and given small encouragement to scientific research. He asserted that chemical laboratories cannot be maintained unless there is a chemical industry, and that research in the laboratory and chemical industry go hand in hand. As a result of the favorable action taken by the Senate on this legislation, it is said that approximately 200 laboratories and plants manufacturing medicinals and coal-tar products which have been built up in this country since the war will be enabled to continue operations which otherwise must have gone out of existence.—*Journal of A. M. A.*, Aug. 26, 1922.

WE are hearing a great deal about the theories and practices of Dr. Albert Abrams, of San Francisco, and some doctors have been so impressed with the so-called marvels of Abrams that they are accepting his theories and using his treatment. Incidentally the Abrams theories and treatment seem to be a fertile subject for professional advertising. Occasionally we run across a patient who is singing the praise of Abrams and quoting from the writings of that gentleman. In commenting upon the matter the *Journal of the A. M. A.* says, "In any event it is all very interesting hot weather reading when one does not want to think."

A few weeks ago the *Boston Medical and Surgical Journal* pointed out the fallacies of Abrams' claims and the absurdities of his cult, and later Abrams, who came on to Boston to prove his theories and was given every opportunity desired or asked in order to establish his reputation as a miracle man, seems to have succeeded in showing himself up as a monumental faker. In fact, the *Boston Medical and Surgical Journal* declared that Abrams' visit to

Boston disclosed two outstanding facts: First, the man persistently refused to submit his methods to tests that could be scientifically controlled or to give a demonstration under conditions that would be subject to the usual rules of scientific criticism; second, in the one case in which he did demonstrate his methods, he found syphilis, tuberculosis, sarcoma and streptococcus infection in a healthy individual. It was pointed out that if Abrams can diagnose disease where no symptoms exist he certainly should have been willing to submit to a test based on the diagnosis of blood specimens from patients with definite ailments. The fact that Abrams refused to perform such tests speaks more eloquently than any critic. Abrams, it is said, claims that his electronic reactions are either the greatest miracle of the age or the greatest fake. Here we have a point of agreement with Abrams—and the electronic reactions are no miracle.

Two or three years ago the House of Delegates of the Indiana State Medical Association passed a resolution, the essence of which was a request that the Indiana University School of Medicine thoroughly investigate the subject of physiotherapy and report its findings to the Association. As we remember it there was a clause in the resolution which asked the medical school to establish a chair of physiotherapy as a part of the medical teaching of the school, if, after thorough investigation, it was deemed of sufficient importance to justify such a move. We have heard nothing further concerning the matter and we believe that the request made was worthy of serious consideration.

Unquestionably there is a field for physiotherapy, and it is because there is a field which we so long have ignored that the osteopaths, the chiropractors, and others engaged in purely mechanotherapy, have been able to accomplish some results and to thrive in consequence. Of course we recognize the fact that these pseudo-medical cults are irrational and inconsistent in their claims that *all* diseases of whatever form are due to maladjustments, misplacements, or pressure of some kind, and that the cure of *any* disease may be accomplished by manipulation, but the fact remains that there are a limited number of cases that are benefited by physiotherapy. Therefore it is not compatible with even good sense to totally ignore a form of treatment which even though applicable to a limited number of abnormal or diseased conditions should form a part of our equipment for practice. In fact our patients should know that we *do* recognize the value of physiotherapy in selected cases, and that we *do* apply that treatment with an intelligence that is not used by either the osteopaths or the chiropractors. Therefore, it is entirely proper that our medical school should teach the subject, not from the standpoint of the ignorant enthusiast but from the standpoint of rational therapeutics, the instruction to cover its rational use *and point out its limitations.*

PROBABLY every doctor in Indiana who does any industrial work has had the experience of having his bill objected to by some liability insurance company. It doesn't make any difference how reasonable a bill may be, it is the habit of some insurance companies to offer objection. In fact objection seems to be a habit with them, without reference to reason. We doubt if any doctor presents a bill that is out of reason, and certainly it is getting to be rather rare for a doctor to attempt to charge excessively for services rendered in industrial cases. There are, however, any number of the better class of men in Indiana who are refusing to do industrial work because they will not wrangle with liability insurance companies over fees; nor will they put themselves to the inconvenience and expense of carrying a claim before the Compensation Board even though there is a reasonable possibility of having the claims allowed.

To our notion this whole subject of professional services in industrial cases is one for a committee on civic relations of our Indiana State Medical Association, but anyway the doctors of the State ought to unite on a policy of action which will bring about some justice, and which will prevent the liability companies from practicing the rank impositions upon medical men that are practiced at the present time. Just as long as the medical men stand for the brow-beating of insurance companies just as long will we fail to get anywhere in maintaining our economic independence. On the other hand, it is a pity that insurance companies cannot realize that the best services are the cheapest services, and when they antagonize the better trained and more experienced medical men they are forced to get their services from the ambulance chasing doctors and others who are willing to take work for what they can get out of it. The insurance company is getting the worst end of the bargain. The old adage "penny wise and pound foolish" applies in buying medical services just as it applies in buying anything else.

A VERY intelligent lay person recently made the remark, "Why do so many doctors attempt work for which they are not fitted by education or training, and why do so many doctors attempt to give advice concerning diseased conditions of which they know absolutely nothing?" The occasion for the remark was brought about as follows: A young boy suffering from partial deafness due to nonsuppurative otitis media, occasioned by two very large tonsils and an enormous bunch of adenoid tissue in the naso-pharynx, was operated by a general physician,

a very bungling and imperfect operation being performed, and afterward told that because the operation did not relieve the deafness the child had an incurable disease of the auditory nerve and should be placed in a deaf and dumb asylum. Aside from the bad surgery, which never should have been attempted by one so untrained, the patient had never had a functional examination to determine the nature of the deafness, and he never had the advantage of appropriate treatment which later restored the child to normal hearing though not bringing about a normal throat that had been mutilated by the bad surgery.

We certainly have no right to complain about the incompetency of the pseudo-medical cults and the damage done by them when we have so many men in the regular medical profession who will attempt anything in the line of medical or surgical treatment, even though not fitted by education or training for it, and the poor patient suffers in consequence. To top the thing off we have a habit of defending these chaps to the public when they do bungling work, and we seldom if ever bring them to task in our medical societies or in private for what is unquestionably malpractice. It is rank commercialism and the desire to secure fees which prompts a lot of ill trained men to attempt surgery and other work for which they are not fitted. We have the greatest admiration for the man who frankly says, "This work should be done by someone who is better qualified than I am to do it," and then proceeds to qualify himself for future work of that character by doing postgraduate work and receiving special training which fits him for that which previously he was ill prepared to do. We often wonder why the public places any more faith in the medical profession as a class than they place in the pseudo-medical cults, for it is such examples as the one cited, of which there are many similar occurring all over the land, which place us on the same plane with the medical pretenders. It certainly is time for introspection and then a house cleaning.

How Is It?

That when a doctor sends a bill to a fellow for $50 for two weeks' treatment pulling him through a critical case of pleuro-pneumonia he hollers for the police—and when the lawyer sends him a bill for the same amount for one hour's appearance in court he thinks he's getting off cheap?

That when a plumber, butcher, baker or milkman jumps into a creek or salt meadow to save an old soak from drowning himself, the papers hail him as a hero and Congress presents him with a life-saving medal—and when the doctor, through the use of brain and trained skill of a highly specialized order, working night and day, saves the life of a useful citizen, it is considered just duty done and no hero medal is awarded or even mention of the incident?

That when the tired doctor seeking needed relaxation like other folks, steals away for a few hours from his office to go to a show, or for a week-end in the country, he is grilled and toasted for neglecting his patients—and when a preacher, a lawyer, an engineer or any other professional man does the same thing, not an unfriendly word is said or unfriendly criticism made of the circumstance?

That when a baby is named by an appreciative mother after the family physician who brought it into the world, folks snicker, shrug their shoulders suspiciously and whisper, "I told you so"—and when it is named after a politician, soldier, captain of industry or a banker, it is accepted as a matter of course and no thought of suspicion is ever excited over the incident?

That when the doctor squeezes the hand of a pretty woman patient, or pinches her on the cheek, it is food for hostile gossip—and when the dominie does likewise it is just a token of spiritual solicitude for her health?

That when a fellow owes money to his doctor, he assumes an injured feeling when pressed to pay—and when pressed by his banker to pay is obsequiously deferential and polite?

That when no merchant on earth will give a fellow credit for a nickel's worth of merchandise, or call at his home on anything except a cash basis—the doctor will trust him and his family for hundreds of dollars' worth of service and never desert him while he is in need of help?

That when medical men ask an appropriation to protect a community from disease and death, legislators turn it down as a needless dissipation of public funds for "foolish medical experiments" and when a politician interested in promoting a new type of street sweeper, water cooler or office rugs asks a similar appropriation, he gets it P. D. Q.?

How Is It?

—Program LaPorte County Medical Society, October 13, 1922.

DEATHS

J. LEVI LORD, M.D., died at his home in Mays, October 17. Dr. Lord was 63 years old. He graduated from the Medical College of Indiana, Indianapolis, in 1882.

WILLIAM L. PARR, M.D., died at his home in Evansville, October 11, at the age of 43 years. Dr. Parr graduated from the Hospital College of Medicine, Louisville, Kentucky, in 1906.

REUBEN R. TIDRICK, M.D., of Bringhurst, died September 19 at the age of 81 years. Dr. Tidrick was a graduate of the Medical College of Ohio, Cincinnati, in 1866. He was not in active practice at the time of his death.

FRANK RANDOLPH, M.D., of Elkhart, was fatally injured when his automobile was struck by a freight train at Lagrange, September 24. Dr. Randolph was 57 years of age. He graduated from the University of Michigan Medical School, Ann Arbor, in 1892.

ROBERT F. PALMER, M.D., of Frankfort, died October 2 at the age of 67 years. Dr. Palmer was founder of the Palmer Hospital, at Frankfort, and had been at the head of that institution for twenty-three years. He was a graduate of the Hospital College of Medicine, Louisville, Kentucky.

JOSEPH B. LENNEY, M.D., died at his home in Crown Point, September 29, at the age of 59 years. He graduated from the Baltimore University School of Medicine, Maryland, in 1890. Dr. Lenney had been an invalid for many years and had not been in active practice.

HENRY E. GREENE, M.D., died at his home in Crawfordsville, October 2, at the age of 55 years. Dr. Greene graduated from the University of Michigan Medical School, Ann Arbor, in 1891. He was a member of the Montgomery County Medical Society, the Indiana State Medical Association and the American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers, for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

THE Benton County Medical Society met at Fowler, October 4.

DR. J. E. RARICK has moved into his new building at Wolcottville, Indiana.

MISS ROSEMARY KELNER has been made superintendent of the Wabash County Hospital.

DR. H. N. OLIPHANT has purchased the interests of the late Dr. R. F. Palmer, in the Palmer Hospital at Frankfort.

DR. H. N. OLIPHANT, of Frankfort, has been made chief surgeon of the Toledo, St. Louis and Western railroad.

DR. E. C. GARBER, of Dunkirk, has been freed of the charge of malpractice brought against him by Mrs. Osborne of Muncie.

THE Washington County Medical Society held a meeting at Salem, October 5. A paper was presented by Dr. L. W. Paynter.

DR. J. H. TAYLOR, of Indianapolis, has resumed his work in pediatrics after an absence of four months in Europe and the Orient.

DR. C. R. SOWDER has announced the opening of his office at No. 7, The Cambridge, Indianapolis, limiting his practice to internal medicine.

DR. R. G. IKINS has announced the removal of his office to the fourth floor, Schultz Building, Fourth and Main Streets, Lafayette, Indiana.

DR. C. L. BARTLETT has resigned as head of the laboratories of the St. Joseph's Hospital, South Bend, to go to China for the Rockefeller Institute.

THE Carroll County Medical Society held a meeting October 13 at Flora. Dr. A. C. Arnett presented a paper. The meeting was preceded by a banquet.

THE Madison County Medical Society held a meeting at the Grand Hotel, Anderson, October 17. Dr. Frank Cregor, of Indianapolis, presented a paper.

DR. E. R. SMITH has announced the opening of offices in the Hume-Mansur building, Indianapolis. Dr. Smith has limited his practice to neuro-psychiatry.

THE Huntington County Medical Society gave a banquet, October 12, honoring Dr. C. H. Good, the new president of the Indiana State Medical Association.

THE Howard County Medical Society held a meeting at Kokomo, October 6. Dr. Robert Moore, of Indianapolis, presented a paper on "Auricular Fibrillation".

A JOINT meeting of the Bartholomew, Jackson and Jennings county medical societies was held at Seymour, October 5. Two papers were presented at this meeting.

DR. FLETCHER HODGES, of Indianapolis, who was injured in an automobile accident in January, has returned from a tour of Central Europe and the British Isles.

MISS INA GASKILL, of Indianapolis, was elected president of the Indiana State Nurses' Association at the meeting held at the Lincoln Hotel, Indianapolis, October 4.

THE Huntington County Medical Society held its regular monthly meeting at Huntington, October 3. A paper on "Consultations" was presented by Dr. R. A. Hoover, of Bippus.

A JOINT session of the American College of Surgeons and the Ohio Valley Medical Association will be held at Evansville, December 4, with headquarters at the Hotel McCurdy.

MISS MARY M. PETERSON, of Indianapolis, was re-elected president of the Indiana State League of Nursing Education at the meeting held at the Hotel Lincoln, Indianapolis, October 2.

DR. A. C. ARNETT announced the removal of his office to the fourth floor of the Schultz Building, Fourth and Main Streets, Lafayette. His practice is limited to surgery and gynecology.

DR. FRANK S. CROCKET has announced the removal of his office to the fourth floor, Schultz Building, Fourth and Main Streets, Lafayette, Indiana. His practice is limited to surgery, urologic and rectal.

DR. O. H. SMITH, Mt. Vernon, Iowa, has been commissioned to assist the China medical board by the Rockefeller Foundation. Dr. Smith formerly was head of the physics department of Cornell college.

THE Eighth District Medical Society held its annual meeting at Muncie, October 27. Dr. Frederick A. Besley, of Chicago, presented a paper on the subject of "The Problem of Sarcoma of the Extremities".

THE city board of health of Indianapolis has appointed Drs. J. L. Conley, Martha J. Smith, William Wise, Joseph Ward, F. R. Carter and E. T. Gaddy as full-time medical inspectors of the city schools of Indianapolis.

THE fifty-first annual meeting of the American Public Health Association was held at Cleveland, Ohio, October 16 to 19. Public health workers from all over the United States, Canada, Mexico and Cuba attended.

THE Seventh District Medical Society held a meeting at Indianapolis, October 26. Papers were presented by Drs. A. S. Jaeger, Indianapolis; O. T. Scamahorn, Pittsboro, Edgar F. Kiser, Indianapolis, and Hugh T. Patrick, of Chicago.

DR. G. W. H. KEMPER returned to his home at 1239 East Orange Grove Avenue, Pasadena, California, on October 24, after having made an extended visit in Indiana. Dr. Kemper attended the Muncie session of the Indiana State Medical Association.

DR. HARVEY MURDOCK has been permanently appointed to serve in the capacity of clinician at the Irene Byron Tuberculosis Hospital, Fort Wayne. Dr. Murdock succeeds Dr. F. H. Gebhardt, who has resigned to accept a position as state clinician for the state of Michigan.

THE Fountain-Warren County Medical Society held a meeting October 12 at Williamsport. Dr. Robert McGaughey, of Danville, presented a paper on "Medical Diagnosis of Appendicitis" and Dr. A. Merrill Miller, also of Danville, presented a paper, his subject being "Surgery of Appendicitis".

A NEW division, that of child hygiene, has been established as a part of the city health department of Indianapolis. Clinic stations will be established in different parts of the city, chiefly the poorer sections. Paul D. Kirby, until recently secretary of the Children's Aid Association, will be at the head of this new division.

THE Indiana Tuberculosis Association has made public a plan of interstate cooperation in anti-tuberculosis work in efforts to study methods used in combating the "white plague". Indiana, Michigan, West Virginia and Ohio will pool their executives' headquarters at the beginning of the annual tuberculosis Christmas seal sale, and will work cooperatively in this campaign.

THE Indiana Division of the American College of Surgeons will hold its annual meeting at Evansville, December 4 and 5, at the Hotel McCurdy, under the direction of Dr. James Y. Welborn, Evansville, chairman, and Dr. E. M. Shanklin, Hammond, secretary. The Ohio Valley Medical Association will merge their annual meeting with the College. A program of unusual interest and value has been prepared, beginning at 9 a. m., December 4, with a series of clinics at the Evansville hospitals in charge of the Evansville members of the College. Speakers on the scientific program include Dr. John B. Deaver of Philadelphia, Dr. Allen B. Kanavel of Chicago, Dr. Hugh Cabot of Ann Arbor, and Dr. Charles Reed of Chicago. A public meeting will be held on the evening of December 4, at which the Rev. C. B. Moulinier, president of the Catholic Hospital Association, and Dr. MacEachern, of Canada, will speak.

using only American-made synthetics, and referring to them at all times by their American names, as suggested by the Council on Pharmacy and Chemistry of the American Medical Association.

DURING October, the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Lederle Antitoxin Laboratories:
Diphtheria Toxin-Antitoxin (0.1L+.)

H. A. Metz Laboratories, Inc.:
Alumnol.

H. K. Mulford Company:
Hay Fever Timothy Pollen Extract-Mulford.

Parke, Davis & Company:
Normal Horse Serum-P., D. & Co.
Rabies Vaccine (Cumming)-P., D. & Co.

E. R. Squibb & Sons:
Acne Vaccine.
Colon Vaccine-Squibb.
Gonococcus Vaccine.
Meningococcus Vaccine.
Normal Horse Serum.
Pertussis Vaccine, Curative.
Pertussis Vaccine, Immunizing.
Purified Diphtheria Antitoxin (Anti-diphtheric Globulin).
Pneumococcus Vaccine.
Staphylococcus Vaccine.
Staphylo-Acne Vaccine.
Streptococcus Vaccine.
Tetanus Antitoxin Purified.
Typhoid Vaccine.
Typhoid Vaccine Combined, Immunizing.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District	Councilor	Number of Counties	1921 Memberships	1922 Memberships to Date	Percentage
First	Dr. Willis	7	176	175	.99
Second	Dr. Smadel	7	149	145	.96
Third	Dr. Leach	9	130	118	.90
Fourth	Dr. Osterman	10	138	136	.98
Fifth	Dr. Weinstein	5	158	163	1.03
Sixth	Dr. Spilman	8	150	160	1.07
Seventh	Dr. Earp	4	425	444	1.04
Eighth	Dr. Conrad	5	172	168	.97
Ninth	Dr. Moffitt	10	253	256	1.01
Tenth	Dr. Shanklin	5	151	145	.96
Eleventh	Dr. Black	6	191	194	1.02
Twelfth	Dr. Calvin	8	241	247	1.02
Thirteenth	Dr. Berteling	8	274	256	.93
		92	2608	2607	

KOSCIUSKO COUNTY MEDICAL SOCIETY

At a regular meeting held October 31, 1922, the Society adopted the following:

1. That House bill No. 267, which this society endorsed during the last session of the legislature, be reintroduced early at this coming session of the legislature.

2. That the following amendment (suggested by the Gibson County Medical Society) be added to House Bill No. 267:

"For the purpose of enforcing the provisions of this Act it is hereby made the duty of the Judges of the several Circuit and Superior Courts in this State, and they are hereby expressly granted power so to do, on proper showing made that any person in said State is practicing medicine without a license as defined herein, to grant temporary and permanent injunctions restraining and enjoining such persons from continuing so to practice medicine in this State until such person or persons have complied with the provisions herein provided."

Should House Bill No. 267 not pass, then we recommend that the above be reintroduced as an amendment to the old law.

3. That the Committee on Public Education (Page 367, October, 1922, issue of the *Journal of the Indiana State Medical Association*) be supplied with sufficient funds by the State society to carry on a thorough and well-balanced statewide education of the public through the press and otherwise.

4. That we all try to realize more keenly than ever that it is our uncured patients who grasp at the straw held out to them by the fanatic, the knave and the uneducated.

5. That a copy of this report (if approved by this society) be sent tomorrow by the secretary to both candidates for State Representative from our County and to our State Senator, with request that replies be sent to our secretary, stating their views on paragraphs 1 and 2.

6. That a copy of this report (if approved by this society) also be sent to the following:

a. Chairman of State Committee on Legislation.
b. Chairman of the State Committee on Public Education.
c. President of Indiana State Medical Association.
d. Secretary of the Indiana State Medical Association.
e. Journal of the Indiana State Medical Association.
f. Gibson County Medical Society.

TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

TUBERCULIN (OLD) AND CONTROL FOR THE PIRQUET TEST.—A preparation of tuberculin-Koch (see New and Nonofficial Remedies, 1922, p. 293) marketed in packages containing three sealed glass tubes of tuberculin, each tube containing tuberculin sufficient for one test and three tubes of control material. Parke, Davis & Co.

TUBERCULIN OINTMENT FOR THE MORO TEST.—A preparation of tuberculin-Koch (see New and Nonofficial Remedies, 1922, p. 293) marketed in collapsible tubes containing 2 Gm. of an ointment consisting of 50 percent of tuberculin-Koch and 50 percent of anhydrous wool fat. Parke, Davis & Co., Detroit. —(*Jour. A. M. A.*, Sept. 9, 1922, p. 897.)

PYRAMIDON TABLETS, 5 GRAINS.—Each tablet contains pyramidon (see New and Nonofficial Remedies, 1922, p. 251), 5 grains. H. A. Metz Laboratories, Inc., New York.

NOVOCAIN SOLUTION 1 PERCENT AMPULES.—Each contains novocain, 0.06 Gm. (1 grain), sodium chloride, 0.036 Gm. (½ grain), and distilled water, 6 Cc. (90 minims). H. A. Metz Laboratories, Inc., New York.

AMPULES RADIUM CHLORIDE, 2 Cc. (United States Radium Corp.)—Radium element, 5 micrograms. For a discussion of the actions, uses and dosage of radium see New and Nonofficial Remedies, 1922, p. 252. United States Radium Corporation (formerly Radio Chemical Corp.), New York (see New and Nonofficial Remedies, 1922, p. 261).

AMPULES RADIUM CHLORIDE, 2 Cc.—United States Radium Corp. (Radium element, 10 micrograms). Radium Chemical Corporation, New York.

AMPULES RADIUM CHLORIDE, 2 Cc.—United States Radium Corp. (Radium element, 25 micrograms). United States Radium Corporation, New York.—*Jour. A. M. A.*, Sept. 23, 1922, p. 1049.)

FERRO-SAJODIN.—FERIOBEN.—Ferro-sajodin is a basic, ferric iodobehenate, containing at least 5 percent of iron and at least 24 percent of iodine. It has the actions of iodides and iron but is claimed to be more stable and palatable than ferrous iodide, not to injure the teeth or to disturb the gastro-intestinal tract and that it is free from a constipating tendency. It is claimed that ferro-sajodin is easily absorbed but slowly eliminated, thus insuring a more prolonged effect than that obtained from inorganic iodides and iron compounds. Ferro-sajodin is indicated in conditions in which iron and iodides are employed, such as anemia, rickets, syphilis, chronic bronchitis and arteriosclerosis with anemia. Ferro-sajodin is marketed only in the form of Ferro-sajodin tabets, 8 grains. Winthrop Chemical Co., Inc., New York.—(*Jour. A. M. A.*, Sept. 30, 1922, p. 1136.)

NOVOCAIN AND L-SUPRARENIN TABLETS "H".—Each tablet contains Novocain 0.06 Gm. (1 grain) and l-suprarenin synthetic 0.00006 Gm. (1/1000 grain). For a discussion of the actions, uses and dosage of procaine, see New and Nonofficial Remedies, 1922, p. 36. H. A. Metz Laboratories, Inc., New York.—(*Jour. A. M. A.*, Sept. 23, 1922, p. 1049.)

HAYFEVER TIMOTHY POLLEN EXTRACT-MULFORD.—The liquid is obtained by extracting the proteins from the pollen of timothy. For a discussion of actions, uses and dosage, see the article on Pollen and Epidermal Extracts, Preparations and Biologically Reactive Food Proteins, New and Nonofficial Remedies 1922, p. 232. This preparation is marketed in packages containing fifteen consecutive doses for a complete treatment and also in packages containing partial treatments only. H. K. Mulford Co., Philadelphia.

PURIFIED DIPHTHERIA ANTITOXIN (ANTIDIPHTHERIC GLOBULIN).—Concentrated diphtheria antitoxin (New and Nonofficial Remedies 1922, p. 280) is marketed in syringe containers of 1,000 units and in syringe containers of, respectively, 3,000, 5,000, 10,000 and 20,000 units. E. R. Squibb & Sons, New York.

NORMAL HORSE SERUM.—This product (New and Nonofficial Remedies 1922, p. 278) is also marketed in packages of one 10 Cc. syringe. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Oct. 21, 1922, p. 1427).

ALUMINUM COMPOUNDS.—Several aluminum compounds are official, including the ordinary alum. The acetate and acetotartrate of aluminum are used in the form of solutions described in the National Formulary. Aluminum compounds are used for their astringent action. They are not so astringent as the lead salts, but they may exert an irritant and even caustic action when used in the form of concentrated solutions or as "burnt" alum. Aluminum compounds are slightly antiseptic. Proprietary preparations of aluminum in combination with organic acids have been introduced with a view of utilizing the astringent and antiseptic properties of their components.

ALUMNOL.—The aluminum salt of betanaphtholdisulphonic acid. Alumnol is used as a mild antiseptic and, in concentrated solutions, as an irritant or caustic. It is used for destruction of the gonococcus in gonorrhea. H. A. Metz Laboratories, Inc., New York.

NOVOCAIN BASE.—Para-amino-benzoxydiethylaminoethane. The base contained in procaine. The action and uses of novocain base are the same as those of procaine (New and Nonofficial Remedies 1922, p. 36), but it is soluble in fixed oils. H. A. Metz Laboratories, Inc., New York.

NOVOCAIN NITRATE.—A brand of procaine nitrate-N. N. R. (New and Nonofficial Remedies 1922, p. 37). It has the actions and uses of procaine, but is compatible with silver salts. H. A. Metz Laboratories, Inc., New York.

DIPHTHERIA TOXIN-ANTITOXIN MIXTURE (0.1L+).—A diphtheria toxin-antitoxin mixture (New and Nonofficial Remedies 1922, p. 282) containing 0.1 lethal dose of diphtheria toxin neutralized with the required amount of diphtheria antitoxin. Marketed in packages of three vials, each containing 1 Cc.; also in packages of thirty vials, each containing 1 Cc. Lederle Antitoxin Laboratories, New York.

ACNE VACCINE.—Acne bacillus vaccine (New and Nonofficial Remedies 1922, p. 298) is marketed in packages of four syringes containing, respectively, 50, 100, 250 and 500 million killed bacilli; in packages of four ampules containing, respectively, 50, 100, 250 and 500 million killed bacilli (with a syringe); in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 1,000 million killed bacilli. E. R. Squibb & Sons, New York.

GONOCOCCUS VACCINE.—This product (New and Nonofficial Remedies 1922, p. 301) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed gonococci; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed gonococci (with a syringe); in vials of 5 Cc., 10 Cc., and 20 Cc., each cubic centimeter containing 1,000 million killed gonococci. E. R. Squibb & Sons, New York.

MENINGOCOCCUS VACCINE, CURATIVE.—Meningococcus vaccine (New and Nonofficial Remedies 1922, p. 302) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed meningococci; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed meningococci (with a syringe); and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 1,000 million killed meningococci. E. R. Squibb & Sons, New York.

PERTUSSIS VACCINE, CURATIVE.—Pertussis bacillus vaccine (New and Nonofficial Remedies 1922, p. 303) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed bacilli; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed bacilli (with syringe); and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 2,000 million killed bacilli. E. R. Squibb & Sons, New York.

PERTUSSIS VACCINE, IMMUNIZING.—Pertussis bacillus vaccine (see New and Nonofficial Remedies 1922, p. 303) is marketed in packages of three syringes containing, respectively, 500, 1,000 and 1,000 million killed bacilli; in packages of three ampules containing, respectively, 500, 1,000 and 1,000 million killed bacilli (with a syringe). E. R. Squibb & Sons, New York.

PNEUMOCOCCUS VACCINE.—This product (New and Nonofficial Remedies 1922, p. 304) is a suspension of killed pneumococci Types I, II, III and Group IV in equal proportions. Marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed pneumococci; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed pneumococci (with syringe); and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 5,000 million killed pneumococci. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Oct. 28, 1922, p. 1519).

(Continued on Adv. page xx)

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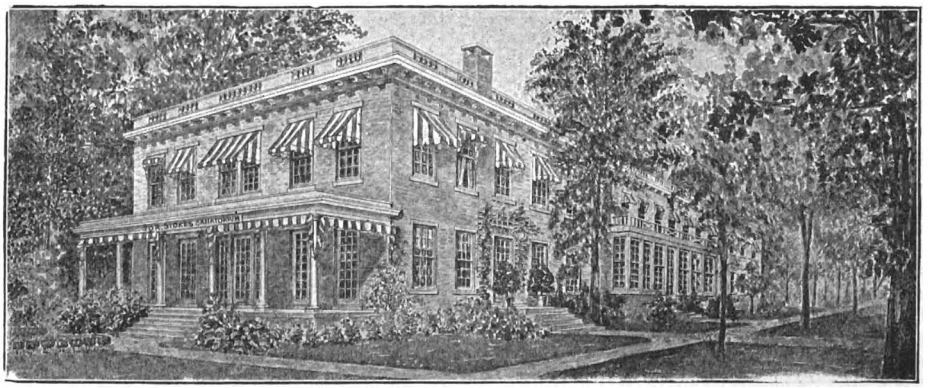
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PROPAGANDA FOR REFORM

AFSAL.—Afsal is being marketed by S. Lewis Summers. It is stated to be "diacetyl methylene disalicylic acid". The product was formerly marketed by the Organic Chemical Manufacturing Co. (S. Lewis Summers, president) as Urasol. Urasol was one of a number of the "Forma-Sol Compounds" marketed by the Organic Chemical Manufacturing Co. and stated to be compounds of methylene disalicylic acid. Sollmann reported in 1908 in an investigation made for the Council of Pharmacy and Chemistry that he had been unable to confirm the claims that were made for these compounds. A subsequent examination confirmed Sollmann's findings.—(*Jour. A. M. A.*, Sept. 7, 1922, p. 1264).

SPAHLINGER'S TREATMENT FOR TUBERCULOSIS.—Spahlinger, according to reports, was a lawyer who abandoned his profession for research work. He appears now to be connected with the Bacterio-Therapeutic Institute, Geneva. According to an article by Spahlinger, the treatment utilized either one or both of two therapeutic principles depending on the nature of the infection. In acute cases, passive immunization with special serums is used. In chronic afebrile pulmonary cases, in non-pulmonary forms and in cases "predisposed to" tuberculosis, active immunization with special antigens is employed. No definite information in regard to the preparation of the product is given. Reports that the British Red Cross is to purchase the treatment are unconfirmed. Reports that the Rockefeller Institute had made an offer to secure the rights for the product in the United States proved unfounded. The exact nature of the Spahlinger treatment does not appear to have been divulged, the treatment is in the experimental stage and the reported results lack confirmation.

ARSENAURO.—Some ten to twenty years ago this preparation had considerable vogue. It is believed to be similar in composition to solution of gold and arsenic bromid of the National Formulary. This contains bromid of gold and arsenic acid. Gold preparations were at one time believed to have therapeutic value, particularly as "alteratives". They have proved inefficient and have been discarded.—(*Jour. A. M. A.*, Oct. 21, 1922, p. 1446).

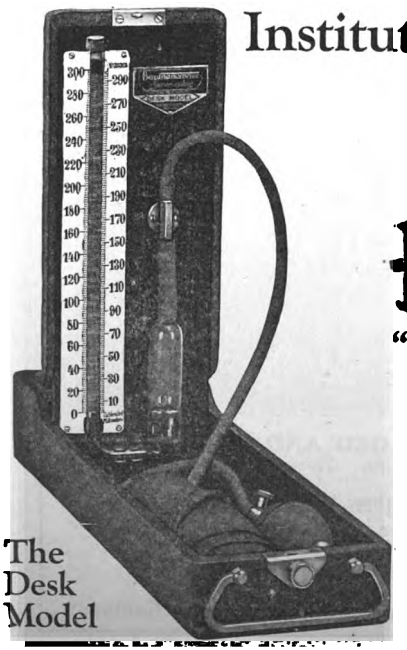
CLEARO.—This was a "patent medicine" sold by C. E. McCuistion, Dallas, Texas, doing business as "The Clearo Co.", as a cure for tuberculosis, asthma, bronchitis, hayfever, serious throat and lung troubles. An investigation by the post office authorities led to the conclusion that the product was worthless for the purposes claimed and that the Clearo Co. was engaged in a scheme for obtaining money through the mails by means of fraud. The Clearo Co. has been denied the use of the mails.—(*Jour. A. M. A.*, Oct. 21, 1922, p. 1445).

PRESENT STATUS OF THE USE OF DRUGS IN HEART DISEASE

(Continued from page 390)

tachycardia, the action of quinidin is uncertain or useless. Occasionally, premature beats can be abolished, but they recur on stopping the drug. Quinidin should not be used indiscriminately for arrhythmia, and should not be administered simply because a patient with heart disease is not doing well, his physician having heard vaguely of the new cardiac therapy with quinidin. It is in auricular fibrillation of recent origin, without heart failure or pronounced mitral stenosis, that quinidin therapy seems at present to be especially indicated.

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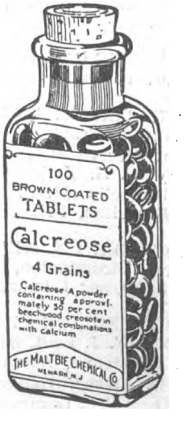
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VOLUME XV DECEMBER 15, 1922 NUMBER 12

ORIGINAL ARTICLES

THE TREND OF NEUROLOGICAL SURGERY*

CHARLES H. FRAZIER, M.D.
PHILADELPHIA

Neurological surgery in the past decade has made notable strides and its recognition as a specialty has been fully justified and imperative. The time-consuming study of the individual case and the time-consuming operation are prohibitive of practice in other fields. In claiming for neurological surgery a field separate and apart from that of general surgery, I have not in mind the mastery of technical details; but the necessary understanding of the physiology, anatomy and pathology of the nervous system and of the knowledge of when and how to deal with the problems and complications exclusively those of intracranial operations. Before this assembly it seems more appropriate to review the field of neurological surgery as a whole, rather than to dwell at length and in detail upon one specific problem, and first a word as to meningitis.

Meningitis, suppurative meningitis, is not an operable condition. Let us admit once and for all that one cannot drain the subarachnoid space as one would the pleural and peritoneal cavity, and abandon what I have always regarded as a futile practice, the introduction of drainage tubes into the basal cisterns, an operation which every once in a while finds a new advocate. We must wait patiently for the time when serum therapy in the treatment of pyogenic infection generally has become effective.

I am disposed to believe that as a sequella of certain infectious diseases, particularly influenza and whooping cough, there develops a meningitis of the serous type, which in its clinical expression may simulate brain tumor insofar as it gives rise to signs of increased intracranial pressure and occasionally to focal phenomena. In my clinic there have been several cases of this kind, where the subsidence of symptoms and ultimate recovery following a decompressive operation may be offered as contributory evidence of this hypothesis.

In the management of intracranial trauma, and I refer chiefly to the severe contusions and lacerations, with or without fractures, we have been forced to realize that only in the minority of cases can we, by active surgical means, reduce the mortality. We have learned by experimental study and by the examination of autopsy material that apart from the hemorrhages and lacerations an essential process in the pathology of brain trauma is an edema, a definite increase in the water content of the brain. The precise origin of the edema is still a matter of speculation, but of its presence there is no doubt, nor is there any doubt that it is responsible, as it spreads rapidly to the brain stem, for many of the fatal cases. Only by recognition of this fundamental process can we appreciate the inevitable failure to relieve the symptoms and to save the patient's life by a decompressive operation, an operation all too frequently and indiscriminately practiced in intracranial trauma. Subtemporal decompression will save life occasionally, where the increase of intracranial pressure indirectly interferes with the circulation of the medulla, but when the medulla is itself the seat of the lesion, a subtemporal decompression will be of no avail.

We have added recently to our therapeutic agents for the treatment of certain intracranial complications sodium chloride as a dehydrating agent. But unfortunately it has not proven effective in checking an advancing edema. *A priori* one might have presumed that, in the treatment of an edema, a dehydrating agent would be in the nature almost of a specific, but experience has shown us that, while the administration of sodium chloride promotes the absorption of fluid in striking fashion, when the fluid is free in the ventricles or in the subarachnoid space, we must acknowledge its inefficacy as now used in saturated solution or half strength when the fluid is tissue bound, as in a diffuse edema. Here is a fruitful field for investigation and experimental study.

However, sodium chloride therapy, intravenously or by mouth, has proved of immeasurable value under certain circumstances and has become an accepted agency in our management of certain intracranial problems; in reducing brain volume when exploring the brain under

(*) Address on Surgery presented before the Surgical Section of the Indiana State Medical Association at the Muncie session, September, 1922.

extreme tension; when closing the wound under similar circumstances; as a means of relieving the terrific headache of a tight brain; or as a method of determining whether a tense cerebral hernia is due to a large tumor or to a dilated ventricle.

As infections and trauma in the domain of neurological surgery are, relatively speaking, minor issues, so the major issue may be said to be brain tumor, and let me preface my remarks on this chapter of brain surgery by reminding you that the time has come when either for purposes of discussion or for reviewing the possibilities of surgical therapy the subject must be subdivided. Just as the term "indigestion" or "dyspepsia" has been abandoned as too general and we now refer specifically to the lesion of the stomach at fault, whether ulcer, carcinoma, dilatation or what not, so with brain tumors the time has come when we must, for the purpose of discussion, recognize different problems according to the nature and the location of the tumor. Too often I think the general practitioner throws up his hands in despair when brain tumor is suspected and allows the lesion to continue with its inevitably fatal consequences if unexplored. He should realize that there are in the brain, as elsewhere, tumors that are distinctly operable as well as those distinctly inoperable, and that without exploration it is often impossible to determine to which of these classes the tumor may belong. Hence, wherever localization is possible, the patient is entitled to an exploratory operation. An endothelioma with its origin from the meninges, with its firm encapsulation as a rule is readily removed; so too the enchondroma, the osteoma, the psammoma and occasionally the tuberculoma.

The fibro-neuroma of the acoustic nerve is a relatively benign lesion, as a rule presents a characteristic clinical picture and is therefore readily localizable, not difficult of approach, and, when not too far advanced, not difficult of removal. Here are very definite and distinct groups, presenting different clinical pictures, offering different surgical problems and each with its percentage of operative risk and eventual recovery. And quite distinct and apart from these are the gliomata, infiltrating and diffuse, only occasionally encapsulated, usually deep seated, often difficult of localization in the early stages and often impossible to remove *in toto*. But even with this unfavorable surgical type there are extenuating circumstances. As they increase in size, the central portion undergoes degenerative changes and this degenerative process with cell necrosis spreads toward the periphery until the tumor is converted into a large cystic cavity; occasionally a remnant of the tumor may be found as a nubbin on the cyst wall.

Such was the case in a lad of 9 (File No. 65844) who six months prior to his admission to the university hospital developed at first twitching about the right side of the face and then general convulsions. Because of the hemiparesis, localization was not difficult and the exploration revealed a large cyst. The evacuation of the cyst gave entire relief. A year later the patient returned with signs of recurring pressure and with our knowledge of the topography of the cyst, it was a simple matter to evacuate it, again with gratifying results.

Therefore, while fully recognizing the surgical limitations of these gliomatous tumors, and our inability to practice complete extirpations in many instances, let us not abandon them as utterly hopeless. Beside spontaneous metamorphosis from a solid to a cystic tumor, I am constrained to believe that the progress of the growth may be retarded in certain occasions by radium therapy. While not prepared to quote end results, as we have a number of cases still under observation and treatment, I am convinced that in certain of these life is being prolonged, perhaps eventually to be saved, by the combined effects of surgery and radium therapy.

We have almost outlived the era when the suspicion of syphilis was attached to most brain lesions and for weeks or months iodides and mercury were administered in enormous doses. But an occasional example of this old-time tradition may be offered in evidence that the lesson has not been learned. A few months ago I removed a large encapsulated endothelioma from a patient who for five years had been treated, now casually, now intensively, as a syphilitic, despite the fact that the Wassermann reaction had always been negative. The patient was almost completely hemiplegic, and, had it not been that painful convulsive movements developed, the true nature of his lesion probably never would have been revealed.

The frequency of convulsive seizures, as an expression of brain tumors, is not usually appreciated. In approximately 10 percent do we find convulsions as a conspicuous, and sometimes for a considerable time the only, manifestation of tumor. These convulsive seizures may be Jacksonian in type or general; in the former instance when the tumor is in or encroaches upon the motor zone, in the latter when there is a secondary hydrocephalus. As a rather striking example of the former, I may cite the case of a patient who for ten years had been treated as an epileptic subject. Only three months prior to my first observation did signs of increased pressure develop, with attacks of headache and occasional vomiting. The diagnosis and the localization of the tumor was readily confirmed in this case by the roentgenogram, which showed with extraordinary clearness the shadow of the calcified tumor. In this case

there was perhaps some justification for the late verification of the diagnosis since, following the attacks, there was no weakness of the extremities. This is a rather characteristic feature of the focal convulsions of brain tumor, and should always arouse one's suspicion. The following abstract of a clinical record tells the story: While at the onset of his illness the patient had a violent pain in the right arm, which, with the face, began to twitch, he did not lose consciousness but for several days he was unable to talk and was partially hemiplegic. From these symptoms he soon completely recovered. An interval of two years elapsed before he had a second attack, differing from the first in that the arm alone was involved. From then there was a gradual loss of power until, when I saw him five years after the onset of his illness, he had become almost completely hemiplegic. A tumor of considerable dimensions was found and readily removed. This is a very instructive clinical record.

A study of the life history of brain tumors is intensely interesting. The impression prevails very generally I think that practically all brain tumors are malignant and as malignant growths elsewhere they run their course in one or two years. Far as this is from the truth, a rather striking feature of the life history of brain tumors is the variation in the rate of growth, and yet because among other things one finds great variations in the rate of growth and because of periods of latency, the precise duration of the growth in the individual case is a matter of conjecture. As an illustration of this latent period I am reminded of a patient in the person of a physician who, until within six weeks of the date of admission had been, so far as he knew, absolutely symptom free. The suddenness of onset and other phenomena pointed suspiciously to encephalitis lethargica. Before an exploration was even considered the patient died and the autopsy revealed a huge infiltrating glioma extending almost from base to cortex. Sometimes, I fear, forgetting these latent periods we are too critical in our attitude toward the physician, who brings his patient to the surgeon when the growth has attained great proportions, and reached perhaps an inoperable stage.

The diagnosis of brain tumor is not as a rule difficult, although one occasionally, as in the case above described, may be misled. To make the diagnosis on the signs of intracranial tension, headache, papilloedema, and vomiting, avails us little since this triad of pressure symptoms gives no clue as to localization. Furthermore, like the metastatic lesions of a carcinoma, it usually betokens a late stage of the disease.

Insofar as concerns tumors of the occipital lobe and parietal lobes, of the zones representing the motor, visual, auditory and speech centers, localization is readily made. Lesions of the frontal lobe still present problems and confusion with the psychoses cannot be eliminated in the absence of signs of pressure. While the right temporal lobe was once looked upon as a silent zone, repeated perimetric studies will show, in a considerable percentage of cases, homonymous field defects.

Because of the long course of the visual pathway, from the calcarine cortex of the occipital lobe to the retina, frequent observations of the visual fields, according to the methods of Walker, give us very important bits of evidence in the localization of brain tumors. There are the lesions of the occipital lobe represented by the homonymous heminopsia, the lesions of the temporal lobe represented by homonymous defects in the upper or lower quadrant (according to whether the ventral or the dorsolateral bundles are encroached upon by the growth), the typical bitemporal hemianopsia of lesions of the chiasm or a varied picture as of a lesion involving one or both optic tracts posterior to the chiasm. The importance of careful repeated studies of the fields may be illustrated in the clinical record of this case.

W. R., aged 28 years, was referred to my service as a brain tumor case. Our first examination revealed, in addition to a marked choking of discs, a general contraction of the fields due to a beginning optic atrophy. The patient was so dull and lethargic that careful perimetric studies were out of the question. After a subtemporal decompression he was transformed from a bedridden to an ambulant case with relief of headache and subsidence of his papilloedema. Subsequent examination revealed a homonymous hemianopsia and because of this and other findings, the tumor at first was localized in the occipital lobe. Later, however, there developed on the other side quadrant defects; these could not be ascribed to an occipital lobe lesion, but could be explained only on the basis of a lesion of the optic tract behind the chiasm. This proved to be the correct interpretation of the visual findings. In this particular case the field defects were not due to the direct pressure of the tumor upon the optic tracts but to the pressure upon the tracts of the internal carotid artery and the middle cerebral artery. The tumor was posterior to the chiasm and as it increased in size the pressure of the arteries caused marked grooving or pressure defects of the tracts, one tract being almost completely bisected. This mechanical effect of arterial pressure upon the tracts, though perhaps infrequent, must be taken into consideration in lesions of this neighborhood, and when associated with evidences of dyspituitarism, point rather to an extrasellar, post chiasmal lesion than to a primary intrasellar growth.

Studies of the topography of the ventricles by roentgenogram after air injection, as proposed

by Dandy, is among the more recent contributions to localization of tumors. While in certain cases it may give contributory evidence, the possibilities of error of interpretation are such that the evidence should be used only as confirmatory of the neurological findings. The ventriculogram may show collapse of an anterior or posterior horn of one ventricle, complete obliteration of one lateral or of the third ventricle, or displacement of both ventricles to the right or left. These are all positive findings that may have significance, but unfortunately the ventricles are deep seated and tumors that originate in or adjacent to the ventricles are usually infiltrating gliomata, that belong to the inoperable group, so that the findings of the ventriculogram will prove, I fear, often of little practical value. The localization of deep-seated growths is one thing; their removal, without unwarranted mutilation or sacrifice of brain tissue and function, another. To convert a patient into a vegetative subject with a brief expectation of life, even though the tumor be removed, may hardly be called a surgical triumph. After all, we, as neurological surgeons, must recognize our limitations in dealing with brain lesions and while the ventriculogram frequently may prove disappointing as of practical moment, we should continue to employ it in selected cases at least until we can evaluate its usefulness in the localization of what may be judiciously considered operable growths.

Ignorant as we still are of the etiology of trigeminal neuralgia, we are masters of the situation insofar as treatment is concerned. Like the herniorrhaphies of the general surgical clinic, operations for trigeminal neuralgia are the commonplaces of the neurosurgical clinic. With the mortality reduced almost to zero, my records show a series of 142 consecutive operations without a fatality, and in the last 234 cases, only one. The operation from the standpoint of cosmetic effect and relief of symptoms is so eminently satisfactory that there is no need of discussion or criticism. We should turn our attention to the investigation of the etiology of the major neuralgias about which we know nothing and to a better understanding of the causes of the atypical neuralgias, so varied in their expressions, so difficult of interpretation as to their origin, and so baffling as to treatment.

The surgery of the pituitary body, or the hypophysis, is one of the later ventures of intracranial surgery and I wish to present to you as briefly as I can my present attitude toward this problem; I say present attitude because we are still in the formulative stage and what may be a viewpoint today may be modified tomorrow. Withal, certain principles, as a result of frequent observation and many operations, are pretty definitely established.

The perplexities which confront the surgeon in his decision as to operation or as to the method of operation, are many and not the least of these is the absence of uniformity in the physical findings of pituitary disorder, especially in the diversity of the visual disturbances. It must be assumed in the first place that the surgeon's responsibility begins only when there is a pituitary tumor, which by pressure on chiasm or optic tract, threatens the patient's vision, and I may say by way of parenthesis, as emphasizing needless delay, that over 50 percent of my patients have, at the first examination, been found already totally blind in one eye. The structural changes of glandular origin either of the acromegalic or dystrophic type are not to be considered as among the indications for operative attack.

In our approach to the pituitary we must elect either the transphenoidal operation or the intracranial transfrontal approach. Taking for example a specific case: This patient, middle aged, has for several years noticed that the vision of one-half the field of the right eye was obscured. The precise nature of the lesion, not appreciated, she drifted on and little by little the vision of the eye was impaired and then totally lost. In course of time vision of the left eye became impaired and she began to have paroxysmal headaches. She then became alarmed and found her way to the neurosurgical clinic. An examination revealed total atrophy of the right optic nerve, beginning atrophy of the left, an hemianopsia, a decidedly excavated sella, and a low metabolic rate. Under these circumstances, I invariably perform a transphenoidal operation, remove the floor of the sella turcica, evacuate the contents partially with forceps and curette and before the patient is discharged, prescribe a course of radium therapy to be repeated at intervals of six months. That is a perfectly simple problem, and should admit of no dispute. The risks of this operation are almost negligible; I have had no fatalities since 1919, and the freedom from operative risks is, after all, the most important factor when considering the choice of operation.

To cite another case, take for example this boy, 17 years of age, dwarfed in growth, with partial optic atrophy, an enormous sella with disappearance of posterior clinoid processes. The x-ray showed in outline a suprasellar calcified tumor, as large as a hen's egg. The approach to this tumor was made, naturally, by a transfrontal exposure. The tumor proved to be a large cyst with a thick calcified wall. The cyst wall was partially excised, its contents evacuated, returning vision improved and with it the somnolence and headache. In other words, when there is evidence of an extensive intracranial lesion, the indications as to method of approach are equally clear. But there are many

cases where the symptoms are difficult of interpretation as to whether the lesion is wholly within the confines of the sella or largely extrasella, as in tumors of the pouch of Rathke or of the hypophyseal duct, and in doubtful cases the first attack should be transphenoidal, with the realization that should there be recurrence or should evidence develop later pointing more clearly to a suprasellar growth, a second attack may be made by the intracranial route.

The evaluation of the surgical methods of treating pituitary tumors must be based on two factors, the operative risk and the period of relief. Since radical extirpation of the sella contents is not feasible, recurrence of visual disturbances must be reckoned with. And it is for this reason that as part of our routine technic radium therapy is prescribed as an essential phase of the treatment. The influence of radium upon pituitary adenomata has been established. From my own experience I could cite an example of the subsidence of recurring symptoms after operation under radium therapy as well as an example of the enlargement of the visual fields under radium therapy alone. Because of the effect of pituitary lesions in distorting the visual fields, these lesions afford an excellent opportunity to observe the effect of whatever plan of treatment one may elect. Within the year I have had under observation a young lady with the incipient signs of pituitary disorder. There was as yet no expansion of the sella, but the cut in the fields was more than suggestive and after a course of three treatments there has been such a decided enlargement of the fields that the necessity for operation has, for the time being, been averted.

In conclusion, if we may judge from the stride of the past decade, greater achievements in neurological surgery may be anticipated in the future. Of this there can be little doubt. And while in part these achievements will be the product of refinements and contributions to technic, they will, I believe, in larger measure be the result of greater accuracy in diagnosis and in localization. The surgeon enjoys an unusual opportunity and should recognize this obligation in the course of his operative experience, to make substantial contributions to the localization of brain lesions. Just as much that we learned of the perverted physiology of the thyroid gland has been derived from the results of surgical intervention, so with the perverted physiology of the brain and the hypophysis, the surgeon is offered a large and fertile field for constructive contributions.

ENDOCRINOLOGY IN ITS MEDICAL ASPECTS*

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Clinical endocrinology is the medical application of the science of internal secretions and the glands which produce them. It is not too much to say that these internal secretions completely dominate growth, determining the dimensions and architecture of the body and each of its component parts, regulate the speed of the life processes and are essential to every function of every organ and tissue of the animal body. Furthermore, as will be shown later, the complete loss of function of any one of several of these endocrine glands is uniformly fatal, often within a few days, while any great increase or decrease in functional activity may cause slight or severe disturbance of health or structure, or both.

The potency of some of these secretions is almost unbelievable. For instance, it has been shown that epinephrin will have a perceptible effect upon smooth muscle fibres in dilutions of about one to a billion, or one grain of the substance to fifty tons of fluid (Hoskins). It is not difficult to understand that a very profound influence would be produced upon nutrition and the function of the body organs by the continuous introduction into the circulation of even extremely minute quantities of such substances as this on the one hand or their withdrawal on the other.

The quantity of these secretions furnished under physiologic conditions is astonishingly small: e. g., there is secreted 0.0002 of a milligram of epinephrin per kilogram of body weight per minute. This would be equivalent in an individual weighing 70 kilograms, or 150 pounds, to about 20 milligrams or about 0.3 of a grain per day.[1]

Within a very few years this subject has assumed vast clinical importance. In attempting to review my own experience and the literature of the subject with the view of correlating the facts into a related and harmonious whole I am reminded of a remark attributed to Ralph Waldo Emerson. When asked by one of his admirers why he did not write a system of philosophy he is said to have replied that the world was still some centuries too young for such a task. While I hope that this is not literally true of the subject in hand, its consummation is without doubt somewhat distantly removed.

Let us make a rapid survey of the component elements of the endocrin system. There are

(*) First paper of symposium on Endocrinology presented before the Indiana State Medical Association at the Muncie session, September, 1922.

(1) Hoskins, Endocrinology and Metabolism. Vol. I. P. 17.

several of these endocrin organs about the function of which there is no question, while there are a number of others about which there is doubt.

The following is a list of the endocrin organs, actual and possibly spurious:

1. The thyroid gland,
2. The parathyroid gland,
3. The pituitary gland,
4. The suprarenals,
5. The ovaries,
6. The testes,
7. The pineal gland,
8. The stomach,
9. The duodenum,
10. The liver,
11. The pancreas,
12. The thymus,
13. The prostate,
14. The placenta,
15. The mammary glands,
16. The carotid gland, and certain other collections of chromaphin tissue which are accessory to the medulla of the suprarenals.

It is obviously impossible, within the scope of a society paper, to discuss with any degree of completeness the many glandular organs above listed. Such a task would require several volumes. It occurred to me that I might compress the best general view of the subject into the smallest space by selecting some salient characteristic phenomena of a few of the most important endocrin glands and dwell upon these and their possible relationship to other endocrin organs, in the hope that I might touch the high points, so to speak, of the general subject.

The thyroid easily occupies the center of clinical attention in the field of endocrinology. Its study has been facilitated by its very large incidence in all civilized countries and its easy accessibility for the purpose of study. Its importance in the animal economy is recognized by everyone. The literature of this gland alone is enormous and in a rapid survey such as the present only a few facts can be considered for the purpose of presenting a general viewpoint in connection with the other endocrin organs.

Its most conspicuous and probably its most important function is the regulation of the activities of the metabolic processes of the body. These activities are dependent upon and indicated by the quantity of oxygen utilized as they are essentially processes of oxidation.

The identification and isolation and chemical study of thyroxim, the active hormone, or perhaps it will be safer to say one of the active hormones of the thyroid gland, by Kendal, marks an epoch in the history of endocrin disease. Within very wide limits the oxidation processes of the body are dependent upon the quantity of thyroxim which the tissue cells contain. These general facts of course, with the exception of those relating to thyroxim, have been fully recognized for a number of years but owing to the difficulty attending their clinical determination they were not available outside of well-equipped hospitals or institutions. The presentation to the medical profession by J. F. Benedict of his portable metabolism apparatus furnished the opportunity for the general utilization of these diagnostic data.

It is customary to estimate the oxygen requirement on the basis of a definite quantity of oxygen absorbed per unit of surface measurement of the body in a unit of time. While any other standard could be used this is done in clinical study, as well as scientific investigations, by taking as a standard the normal requirements per square meter of body surface per hour of time and for healthy adult males this has been found to be the equivalent of about 38 calories of heat; the abnormal variations above and below this standard are calculated and recorded in percentages of increase and decrease.

This subject was presented by the writer in its clinical aspects before the medical section of the American Medical Association in June, 1919; this being the first time that the subject had ever been presented before this organization in its clinical aspects. Since this time its clinical application has become little less than universal.

As thyroid secretion increases, metabolism goes up with it, increasing above the normal 25, 50 or 100 percent or even more. With insufficiency of thyroid secretion the oxidation processes gradually drop to 40 percent below the normal average, at which point, presumably without any thyroxim, they remain stationary, indicating that there are other factors which control the rate of oxidation below this level. It would be difficult to over-estimate the tremendous importance of such a variation of the fundamental chemical processes of life and for all practical purposes, with very minor exceptions, this is due entirely to the secretion of the thyroid gland. While other endocrin glands, for instance the suprarenals, have a slight influence upon metabolism, it may be safely assumed that these larger variations, in the absence of fever, indicate, with scarcely a single exception, thyroid pathology. This is one of the most important advances made in scientifically accurate diagnosis in the history of medicine.

It must not be supposed that this is the only function of the internal secretion of the thyroid gland. Indeed the consequences of moderate excess or deficiency carried out through long periods, or perhaps the life of the individual, leads to the most striking deviations from the normal architectural and other characteristics of the human body. We will look in vain, I think, for any more startling variations from the normal than those presented by the cretin on the one hand and certain types of hyperthyroidism on the other but aside from these extreme types there are many others which show

the profound influence of thyroid function in many ways. For instance, with somewhat subnormal thyroid secretion there is a tendency to retardation of bone growth with thick or even deformed bones, together with rather thick, rough, dry character of the skin, in fact the early phase of myxedema. With prolonged states of overfunction during the period of development the bone structures become delicate, with long, slender fingers, increased mobility of joints; thin, transparent, moist skin, with occasionally mottled erythema of neck and chest.

Among the important aspects of thyroid pathology may be mentioned its well-known function of combating infections by hyperplastic processes, undoubtedly associated with increased thyroid secretion. This is especially important in view of the relationship which is becoming more and more recognized of certain hitherto little understood types of low-grade sub-infection; most commonly perhaps water borne, though not essentially so.

It is difficult at present to reconcile the endemic incidence of goitre with an exclusive theory of infectious etiology. However, Dr. Wilson of Rochester, Minnesota, has apparently reached the general conclusion very definitely that the usual cause of goitre is a slow, chronic infection of this type, being in full agreement in this regard with McCarrison, Sajous, and others. In fact, I have said enough I think to show that the problems of thyroid pathology are among the most pressing and difficult of the entire field of preventive medicine.

A general study of the endemic foci of goitre seems to line up very plausibly with wide-spread infections. For instance the crowded population of Switzerland, with the intensified fertilization of the soil, offers very plausible opportunity for contamination of food products. On the other hand it would be difficult to explain the goitre zone of the Great Lakes region on this theory alone. A most remarkable phenomenon is the one reported by Hubner in which 16,000 individuals with goitre lost their goitres on immigration from Algiers to Prussia. An adequate study of differences in the sanitary conditions of these two countries might furnish the explanation.

In this connection I wish to refer briefly to the general etiology of the endocrinopathies and offer what seems to me the very plausible suggestion that the low grade infection theory might apply quite as well to the other endocrin glands. I would, however, make the important reservation that there are, without much doubt, other auxiliary or predisposing causes which may be sought for principally in the domains of heredity and environment.

It seems probable, if these infectious theories are substantiated, as they apparently are, that the time is not far distant when a large incidence of goitre will be as much of a sociologic disgrace as typhoid fever is now. The prevention of goitre should be our aim. In its early stages probably every case is amenable to medical treatment, and Sajous says that with early recognition and adequate treatment thyroidectomy will become a thing of the past. Whether or not this roseate prophecy will ever be fulfilled remains to be seen.

For the present the syndromes of cretinism and hyperthyroidism, with or without the other stigmata of Graves' disease, the nervousness, tremor, mild tachycardia, etc., are with us. Some of these syndromes may be directly due to infections without the aid of hyperthyroidism but with basal metabolism tests available we do not need longer to be in doubt on this problem.

I have said nothing of thyroid-therapy, nor can I take time to say more than that in the treatment of myxedema and allied conditions it offers one of the most brilliant chapters of organo-therapy. One cannot help wondering whether such interesting facts as the variation in the average weight of the thyroid, which varies so greatly in different countries and nationalities, may not be associated with sociologic and environmental conditions as yet illy understood, or not understood at all. For instance, the average weight of the thyroid in the United States is said to be 22 grammes; in Germany, 30 to 60; England, 30 to 40; France, 22 to 24. If the Germans have more thyroid than their Gaelic neighbors, it is quite worth while to ask the question, Why? And the answer may be indicated in the views just outlined.

I have already alluded to some of the remarkable property of the best-known, and indeed only known, hormone of the suprarenal gland and we will use this endocrin gland as a further illustration of the methods of procedure, experimentally and clinically, which have led up to the present state of our knowledge. This little gland, of such remarkable potentiality, weighs five grammes and one gland is placed upon the superior pole of each kidney. Its importance physiologically and clinically is very great. It furnishes at least one important hormone, epinephrin, which has already been referred to. At this point it might be well to call attention to the fact that any one active principal which has been isolated from any one gland may or may not be the only one. It is much more likely perhaps not to be the only one. In the case of the suprarenals we find an organ composed of two distinct parts or structures; a central portion or medulla and an outer layer of cortical substance. The medullary portion is composed of what is called chromafin tissue and it is this part of the gland alone which forms epinephrin. The entire structure of the medullary portion of the gland can be destroyed without fatal results while the destruction of the entire gland, or the cortical substance alone is always fatal. It

would not do to conclude from these facts that epinephrin is not essential in the animal economy because chromafin tissue which always secretes epinephrin is found in smaller collections elsewhere in the body. It has been estimated in fact that there is more chromafin tissue outside of the suprarenal medulla than inside of it. This proportion might vary in different animals and individuals and it is very probable that the destruction of the suprarenal gland would not include one-half of the total epinephrin producing tissue.

In spite of the fact that destruction of the cortical portion of the gland is uniformly fatal, no active hormone has been isolated from it, yet it is perfectly certain from the fatal results of its extirpation that some such extremely important biochemical body must exist.

In the earlier work upon the experimental extirpation of the suprarenal it was thought by some that the fatal results were due to the coincidental traumatism unavoidably produced in the operative procedure. This question was definitely settled by Biedls, who dissected the glands from their normal position, leaving them attached by pedicle of blood vessels, etc., and transplanted them in subcutaneous position. When they had fully recovered the glands were removed by a very simple operation with the usual fatal result.

There seems to be satisfactory evidence to prove that the medullary and cortical portions of these glands are really separate organs. The embryologic derivation of the suprarenal medulla is ectodermal, or the same as the derivation of the skin and nervous system, while the cortex has a meso blastic origin corresponding with the origin of the parenchymatous organs which confirms their anatomical physiologic independence, and some investigators think that the chromafin tissue of the medullary portion of the gland is accidentally included in the cortical portion by an enfolding process just as other collections of chromafin tissue might have been included. These facts are of more than speculative interest, showing in the first place the sharp limitations of our knowledge and proving the existence of important chemical bodies of which at present we know nothing.

The most conspicuous phenomenon in the partial or complete destruction of the suprarenal gland is weakness of the skeletal and cardiac muscles.

There are, of course, many other symptoms associated with this one. According to Cohoe* there are five different clinical syndromes produced by disturbance of the suprarenal gland:

1 (and most conspicuous) Addison's disease,
2 Hypo-adrenia,
3 Pseudo-hermaphodism,
4 Pubertas-precox,
5 Virilismus.

(*) **Endocrinology and Metabolism, Vol. 2, P. 277,** et seq.

It is obviously impossible to make even the briefest discussion of these syndromes. It has now been about three-quarters of a century since Addison's disease was first described and many points are still in controversy. Asthenia and pigmentation of the skin are the most striking characteristics. That it is related to the suprarenals is well established but just what part of the gland and what sort of pathology is essential are still matters of dispute. It seems certain that the cortex has more to do with it than the medulla.

In 70 percent of a considerable group of cases adrenal tuberculosis was present. In another considerable proportion simple atrophy existed. Next to the muscular weakness the pigmentation or melanoderma is the most consistent symptom but is not quite universal. It should be emphasized that patients may die of Addison's disease without the pigmentation. This is very liable to occur in the fulminant cases. I can recall several patients in my own clinical experience which I believe now may have been Addison's disease without pigmentation. Extreme and rapidly progressing weakness with very marked arterial hypotension with a systolic blood pressure sometimes reaching a point below 50 should create a strong suspicion of Addison's disease with absent or belated pigmentation.

If hypo-adrenia, which is very apt to be rapidly fatal, is to be recognized as a definite syndrome, the distinction between this and the early stages of Addison's disease without pigmentation would seem to be almost, if not altogether, clinically impossible.

The other suprarenal syndromes must be passed with mere mention. Those wishing to follow up the subject are referred to the excellent monographs of Cohoe, Quinby and Jump*.

The pituitary gland is essential to life; its removal being uniformly fatal. When removed from its bed in the turkish saddle one is astonished at its diminutive size. We place it on the scales and find that it weighs about 10 grains or 0.65 of a gramme.

The more one looks at this minute fragment of gland tissue the greater the astonishment becomes that it can possibly do what we know it does.

As with most of the endocrin glands the clinical phenomena may be divided into three groups, viz., hyper-function, hypo-function and disfunction.

The results of hyper-function vary according to whether they occur congenitally or later in life. If it is the former the active principles of the anterior lobe stimulate continuous overgrowth, more or less symmetrical in type, and gigantism results; if it occurs later as an acquired pathology the result is acromegaly. In this disease we note, as the most conspicuous

(*) **Endocrinology and Metabolism, Vol. 2.**

features, the peculiar deformities of bony growth—angular facies, enlargement of the mandible, enlarged hands and feet, etc. The individual is marked as the victim of a peculiar pathology. The results of deficient pituitary secretion are scarcely less conspicuous. The most notable is dystrophia adiposo genitalis, which is the equivalent in pituitary pathology of myxedema and cretinism in thyroid pathology. The typical cases are very characteristic and among the most obvious thing in these cases is the excessive obesity, largely distributed around the lower abdominal zone and hips. Closer examination reveals a more or less complete absence of pubic hair and infantile type of the genitalia. This syndrome is due to deficiency of the pituitary secretion.

Another syndrome is the well recognized type designated as dwarfism, which we know is also one of the results of early pituitary deficiency.

Still another is infantilism, characterized by arrested development, temporary or permanent in certain structures of the body. For instance, the persistent foramen ovale, cleft palate, extremely dwarfed stature, etc.

Still another type is the cachexia hypophysei privi with the very characteristic train of symptoms following the complete destruction of the pituitary gland. These symptoms are tremors, fibrillary twitchings, diminution in pulse and respiratory rate, fall in temperature, coma and death. These symptoms and the fatal result will not appear if a small functioning portion of the anterior lobe remains. They can also be prevented by the intra-cerebral transplantation of a small segment of the anterior lobe of a healthy pituitary gland, also by the subcutaneous injection of infusions of the same part of the gland.

Now these characteristic syndromes which I have briefly indicated, resulting from excess, deficiency or complete absence of the pituitary secretions, do not always exist in a pure, unmixed form. For instance, we may have a combination of gigantism with acromegaly, which I think might be explained by congenital hyperpituitarism, and later, perhaps, after an intermission of the hyper-pituitary state, or without an intermission, an acute exacerbation of the hyper-pituitarism, superadding the acromegalic syndrome to that of gigantism. Gigantism is probably always congenital and acromegaly always acquired.

It seems as though it should be possible with a thorough knowledge of the endocrin symptoms to recognize sometimes the early stages of acromegaly before the bony deformities have developed. There is clearly a period between the initial symptoms and the beginning of the characteristic deformities of acromegaly during which the permanent stigmata of the disease, if recognized, could be at least foretold and an opportunity given, if possible, to limit the duration of the hyper-pituitarism and possibly prevent the subsequent deformities. The diagnostic data of beginning acromegaly are first, severe persistent pituitary headache with lowered sugar tolerance, and tendency to glycosuria. These two symptoms should create a suspicion of beginning acromegaly which if the diagnosis is to be of practical value to the patient should be recognized before the secondary sexual characteristics, which develop a little later and which are the prelude to the bony deformities, have manifested themselves.

Again acromegaly has been found associated with exophthalmic goitre. Another group of cases presents the symptom complex, for instance, of either gigantism or acromegaly, together with the stigmata of infantilism. Such cases as these may well be called dispituitarism and offer excellent material for pathological speculation. For instance, has the syndrome of infantilism been stamped upon the individual by an early hypo-pituitarism and later the glandular activities becoming excessive and producing either gigantism or acromegaly, according to whether the change occurs congenitally or post-natally?

The whole subject of glandular disfunction is very perplexing and appears to me to rest upon one of two hypotheses:

First: The existence of one or more unidentified hormones, along with perhaps one that is fairly well understood and fully recognized, thus giving rise to various groupings of symptoms.

Second: An alternation of functional activity such as that above indicated by the co-existence of the syndrome of hypo and hyper-function; such conditions are actually indicated by what we now know of thyroid and pituitary pathology.

With regard to the active hormones of the pituitary gland we know very little about them. Only one definite chemical compound has been isolated, viz., tethilin, from the anterior lobe. It will be remembered that the complete removal of the anterior lobe is uniformly fatal and produces characteristic syndrome of cachexia hypophysei privi. On the other hand the posterior lobe apparently contains the active principles which have been classified as pressor, depressor and oxytocic. It has been conjectured that these unidentified hormones of the posterior lobe are derived by a splitting up process from the tethilin of the anterior lobe which is probably the particular hormone concerned when excessive in the production of the syndromes of overgrowth and when deficient of the syndromes of subnormal or arrested development.

Some of the most brilliant achievements of organo-therapy have been in cases for instance of the syndromes of hypo-function by intra-cerebral transplantation of the pituitary or subcutaneous injections of infusions of this gland.

In one of Cushing's cases subcutaneous injections were first used, producing great improvement which was later made permanent by the intra-cerebral transplantation of the pituitary gland of a newly-born, healthy infant accidentally dying at birth.

Time will not permit the discussion of the parathyroids with their syndrome of tetany and disturbances of calcium metabolism, etc.

Of the remaining eleven glands in the list of endocrin organs, the ovaries, the testes, the stomach and duodenum, the liver, the pancreas, the placenta and the mammary glands undoubtedly produce internal secretions of greater or less importance. An endocrin function of the pineal gland, the thymus and the prostate has not yet been satisfactorily established and space will not permit any discussion whatever.

Now what is the meaning of the entire subject of endocrinology to the general diagnostician and therapeutist? It is, I think, perfectly obvious that there is a large group of cases which can be differentiated only by utilizing all the facts concerning endocrinology and availing ourselves of the special diagnostic methods which have been developed within the last few years, and especially basal metabolism and carbohydrate tolerance. Many cases of endocrin disease have a perfectly normal basal metabolism. It is fully established that epinephrin causes definite but transient increase of basal metabolism. It bears no comparison with that produced by thyroxim and lasts only a very brief time. It is especially in alterations of the heart rate and certain types of nervousness in which the basal metabolism is almost decisive either for or against disturbances of thyroid as the probable causal factor. An increase or decrease in carbohydrate tolerance of a given case has an important bearing on the diagnostic questions. Frequently the presence or absence of one or two symptoms will point toward the existence of hyper-function on the one hand or hypo-function or disfunction on the other. It has frequently happened in my experience that the existence of endocrin disease and syphilis or tuberculosis as the principal factor in the causation of a given syndrome could be decided in this way.

After all what about therapeutics which is the goal of all clinical study? The value of these methods in differential diagnosis indicates the answer to this question in part.

Organo-therapy, which is commanding so much attention at the present, is far from being the only therapeutic deduction derived from a positive diagnosis of endocrin disease. In fact, I feel called upon to express a warning, if not a protest against the indiscriminate exploitation of organic products by commercial interests. A prominent writer along these lines, referring to the well-known facts concerning promiscuous use of these products, characterizes it as one of the worst forms of quackery and quotes the preposterous opinion that a number of endocrin products can be given and that nature will select the ones most needed. Such a total lack of the scientific spirit and careful consideration of all the facts is humiliating to say the least. In therapeutics, as well as in diagnosis, the endocrin glands have come to the front to stay but the number of these products that have a proven scientific basis is as yet very small and their use requires the most painstaking discrimination in order that the patient may not suffer from commercial vendors on the one hand and unscientific medical practice on the other.

THE NEUROLOGICAL PHASE OF ENDOCRINOLOGY*

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For practical purposes the human nervous system may be divided into three levels of activity, the vegetative, the sensorimotor and the psychic.

For a long time it has been asserted that the nervous system is the means by which all of the several parts of the human unit are integrated by a species of complicated adjustment to given ends. It can be perceived how this integration is actually brought to pass by means of the vegetative nervous system and the chemical regulators of metabolism at a physico-chemical level, and how by the successive compounding of reflexes at the sensorimotor level the human unit is further integrated, so that as a whole work more consistently toward broadly defined goals, the integration manifesting itself at successively higher and higher levels in the history of the individual and the species.

Viewed in this way the individual is seen struggling along the path of evolution in constant conflict between an inherent inertia that would keep it at a given level, but gradually advancing by a series of give and take compromises that finally bring it to a better adjustment with its environment at ever higher levels of integration.

This integrative action of the nervous system is illustrated in the simple reflex with its innervation of agonists on the one hand and antagonists on the other, and the channeling of final common pathways for nervous discharge.

This law of conflicting tendencies, pathways of opposites-ambivalence, where the final issue for higher integrations is made possible at the sensorimotor level by the tension of reciprocal innervations, is found also to be the rule in the vegetative nervous system, with its double set of pharmaco-dynamically demonstrated opposed elements, mediated at least in part by

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equally opposed, exciting and inhibiting chemical substances secreted by the endocrinous glands—the hormones.

Finally an analogous ambivalent mechanism is seen working at the highest, the most complex level, the psychic, which determines conduct with the assistance of the phenomena called consciousness, in which a psychological symbolism is found replacing sensory and motor neurons, and exciting and inhibiting hormones.

The biological activities which maintain life at the lowest level are physical and chemical, and thus that portion of the nervous system which has direct controlling influences over these activities is properly designated as the vegetative nervous system, and that part of neurology which has to do with a consideration of these physico-chemical systems, because it deals with the nervous control of the viscera and of metabolism, is properly designated as visceral or vegetative neurology.

In this region of vegetative neurology a rich variety of disturbances is found, involving the glandular, gastro-intestinal, genito-urinary, vascular, respiratory, muscular, cutaneous, and bony systems. In addition, there are certain complex groups involving, for the most part, the glands of internal secretion, the endocrinopathies.

From the foregoing we see how the three levels of the nervous system are interdependent one upon the other. Inasmuch as the physico-chemical substances secreted by the endocrine glands have their direct action upon the vegetative nervous system and, vice versa, the influence of the vegetative nervous system upon the glands of internal secretion, we will consider this relationship more minutely and endeavor to show the effect upon the other levels, and the individual's various physiological, neurological and psychological reactions.

Stimulation of the glands of internal secretion takes place through the vegetative nerves, and the hormones produced by the glands in turn stimulate vegetative nerve structures. Thus, the sympathetic nervous system, the endocrine glands and the gonads form a basic tripod, entrusted with the duty both of the preservation of the individual and the continuity of the species. Their relationship is shown in disease as well as in health, and is reflected in many of the neuroses and psychoses.

The importance of these two subjects can be appreciated fully only when the fact is grasped that every normal action expressed in the unstriated musculature of the body, the heart, and the secreting glands, must be brought about in response to stimulation by the chemical substances secreted by the glands of internal secretion or by the vegetative nerves. There cannot be a single sensory or psychical impression which does not, at least theoretically, affect the vegetative nerves and endocrine glands. Further, if the impressions are strong, they upset the equilibrium in the endocrine and vegetative systems and produce symptoms of disease. Many symptoms which manifest themselves in the so-called vegetative structures (smooth musculature, heart, and secreting glands) are due to disturbances in the normal physiologic equilibrium of these two systems.

Not only are both the endocrine and vegetative systems subject to impulses of a physical nature, but each system is influenced by psychical impulses and by impulses which originate in the other system. It is now our purpose to inquire into this relationship and show, as far as we are able, how the vegetative nerves influence the endocrine glands and how the chemical substances produced by these glands influence the visceral nerves.

The autonomic or vegetative nervous system consists of two divisions, the sympathetic and parasympathetic. The sympathetic division is sometimes called the thoracicolumbar outflow, because it takes its origin in the cord from the thoracic and upper four lumbar segments. The parasympathetic division, on the other hand, is called the craniosacral outflow, because the nerves composing it arise from the brain and the sacral portion of the spinal cord. The parasympathetic division is also sometimes called the "autonomic" or "vagus system" since the vagus nerve is the chief one of that system. Certain of the body structures are innervated wholly by one division of the autonomic system and others by the other; again, structures are activated by one division and inhibited by the other. There are certain centers in the brain for the regulation of many important functions presided over by the vegetative system. These centers may be looked upon as being receiving and dispatching stations, through which integration of action is maintained. There is a sympathetic center in the brain which Karplus and Kriedl have described as lying near the tuber cinereum. It is significant that these sympathetic centers lie in the same area as those which control such functions as thermogenesis, polyuria, and vasomotor changes.

Stimuli which act upon the sympathetic system may either act on the sympathetic centers in the brain and cord, or on the true sympathetic motor cells in the peripheral ganglia. Some evidence has been published by Camus and Roussey which would indicate that the polyuria depending on hypophyseal disease might be due to local irritation of these centers, as will be mentioned later.

The pilomotor muscles, the sweat glands, the blood vessels, fallopian tubes, body of the uterus, vas deferens, seminal vesicles, and ureter, also the suprarenal and thyroid glands and the anterior lobe of the pituitary body are wholly, or almost wholly, supplied by fibers from the

sympathetic system, both activation and inhibition of action being accomplished through neurons belonging to the same system.

There are certain structures which are believed to be supplied by the parasympathetics, such as the ciliary muscle, esophagus, and cardiac end of the stomach.

The following structures are activated by the parasympathetics and inhibited by the sympathetics:

1. The gastro-intestinal tract, both musculature and secreting glands, excepting the esophagus, cardiac end of the stomach, and sphincters.

2. Those structures derived embryologically from the gastro-intestinal tract, both musculature and secreting glands, such as: (a) the respiratory tract, (b) liver and gall bladder, (c) pancreas, (d) the body of the bladder and the muscles around the prostate gland.

3. Certain structures about the head: (a) the pupillary muscle, (b) the lacrimal glands, (c) salivary glands, (d) the gland and smooth musculature of the nose, sinuses, mouth and pharynx.

The following structures are activated by the sympathetics and inhibited by the parasympathetics: (1) The sphincters of the gut and bladder, (2) the trigone of the bladder, (3) the urethra.

The necessity for students of endocrinology being familiar with the vegetative nerves and the action of each division upon the various tissues is evident from the fact that some internal secretions act upon one division, others upon the other, and some apparently upon both; and since many of the symptoms which result from altered secretions of the endocrine glands depend upon the manner in which they affect the vegetative nerves, it is absolutely essential for clinicians to bear in mind that symptoms on the part of the vegetative structures must necessarily differ according to the sensitiveness of the various nerve cells to stimuli.

The medical profession is indebted to Eppinger and Hess for a valuable contribution to clinical vegetative neurology in their conception of "vagotonia" and "sympathicotonia". These clinicians have shown that by the physiologic difference in action of the sympathetic and parasympathetic neurons of the vegetative system there may be recognized two definite clinical groups, "sympathicotonic" and "vagotonic," which are met constantly in practice. In certain groups of men symptoms of predominant sympathetic stimulation exist, and in others predominant parasympathetic stimulations. These different characteristics depend upon the fact that the two divisions of the vegetative systems are antagonistic in action in structures which are supplied by both, and further, that each supplies certain structures alone. If the sympathetic nerve cells are hyperirritable, sympathetic action predominates in the individual; if the parasympathetic nerve cells are hyperirritable, parasympathetic action predominates. Those patients belonging to the former group are called "sympathicotonic", those to the latter, "vagotonic".

Sympathetic hyperirritability (sympathicotonia) is manifested in some of the following symptoms: Dilation of the pupil; protrusion of the eyeball; lessened lacrimal secretion; lessened salivary secretion; lessened mucous secretion in the nose and throat; lessened secretion in the gastro-intestinal tract, showing particularly as hypochloryhydria and retarded digestion; lessened motility in the gastro-intestinal tract, showing a slowness in emptying the stomach, contraction of sphincters of the gut, and a general relaxation of the intestinal musculature leading to the common type of constipation found in the acute infectious diseases; rapid pulse and at times rise of blood pressure, although vasoconstriction in one area is usually accompanied by compensatory vasodilation in others; increase in body temperature due to vasoconstriction in the superficial vessels which interferes with the elimination of heat; and an increased production of heat resulting from the increased metabolic action; diminution in the amount of urine; alimentary glycosuria; contraction of the ureter; contraction of the uterus; goose flesh; and increased sweating. Increased suprarenal, thyroid, and pituitary secretion also follow sympathetic stimulation; and this in turn produces symptoms varying in degree according to the amount of extra secretion formed.

Parasympathetic hyperirritability (vagotonia) is accompanied by some of the following: Contraction of the pupil; widening of the eye slits; increased lacrimation; increased secretion of nasal, oral, and pharyngeal mucous glands, conditions commonly known as catarrh; increased salivary secretion; contraction of the laryngeal muscles, such as is met in laryngospasm; increased bronchial secretion, such as is met in bronchitis; spasm of the bronchial musculature, as found in asthma; hypermotility and hypersecretion of the gastric glands, including that of hydrochloric acid; hypersecretion and hypermotility of the intestine, leading to colicky pains and state of either spastic constipation and stasis or diarrhea, depending much on the degree of stimulation and on whether the circular or longitudinal muscles are predominantly the recipients of the increased stimulation; irritable bladder; and incontinence of urine and feces. Sweating is also found in conditions which are accompanied by the above group of symptoms, as well as those belonging to the sympathetic syndrome.

It must be evident to the most casual observer that the action of a given stimulus would differ, according to the irritability of the nerve cells acted upon; but when we consider that internal

secretions are more or less selective in their action, affecting one division of the vegetative system at times to the exclusion of the other, it is further evident that the resultant action would differ greatly, according to whether the patient is a sympathicotonic or a vagotonic. With this conception grasped, one very important fact in explaining the variability of symptoms in the same disease in different individuals is established. Hyperirritability may be general or confined to certain structures. Symptoms will often be confined to certain structures, because the nerve cells in these structures are discharged only to a significant extent. If the exciting stimulus were stronger, the symptoms would be more widespread, involving other neurons.

There is an intimate relationship between the glands of internal secretion and the vegetative nerves. Stimulation of the sympathetic nerves, as before mentioned, increases the secretion from some of these glands, particularly the medulla of the suprarenals, the thyroid, and possibly the pituitary. Stimulation of the parasympathetics activates others. There is evidence also that the secretion from the various endocrine glands, on the other hand, activates the vegetative nervous system, some secretions, like that from the suprarenals, hypophysis, and thyroid, acting upon the sympathetics, and others such as that of the parathyroid, ovary and pancreas, acting upon the parasympathetics. The intimate relationship between the autonomic system and the endocrine organs has been especially emphasized by the Italian School. Pende (1916) has developed at length the conception of such relationship. Indeed, so close does he regard the functional connection that he consistently treats of the two as constituting for practical purposes a single mechanism. It is assumed, says vonFurth, that the suprarenals, thyroid, and hypophysis, activated by the sympathetics, have an accelerating influence upon metabolism, stimulating protein destruction, carbohydrate mobilization, and likewise the metabolism of fats, while they also control the water and salt output and the galvanic irritability of nerves.

The importance of these facts is evident to the clinician who appreciates them, and affords a basis for understanding the nervous manifestations found in endocrine disorders and endocrine manifestations found in nervous disorders. One cannot conceive of any marked change taking place in the secretion of any of the important endocrine glands, either a withdrawal, as occurs in the conditions of hypofunction, or an addition, as occurs in conditions of hyperfunction, without affecting or destroying the equilibrium of the vegetative nervous system, neither can one conceive of any marked stimulation occurring in either of the divisions of the vegetative system, without affecting some of the endocrine glands. In disturbance in the vegetative nerves, the symptoms are often expressive of a stimulation of one division only, although at times there may be symptoms belonging to both divisions. Endocrine disturbances are almost always pluriglandular. With this introduction, it can be seen that the action of the vegetative nerves and the secretions of the endocrine glands are so intimately related and correlated that they cannot be separated. Both are avenues through which action in different structures is correlated and integrated; and each in turn stimulates and receives stimulation from the other.

With the foregoing facts and theories in mind, we will endeavor to show the relations between some of the more important individual endocrine glands and the vegetative nervous system as well as the sensorimotor and psychic levels.

The secretion of the medulla of the suprarenal gland, in its relationship to the vegetative nerves, is better understood than that of any other internal secretion. This understanding has been facilitated by the determination of the close relationship which exists between the chromaphil tissue in the medulla of the suprarenal body and the cells of the sympathetic division of the vegetative nervous system, as shown by Balfour, Kohn, and Gaskell. The chromaffin cells found in the medulla of the suprarenal gland are differentiated sympathetic cells, having been derived from that portion of the central nervous system which migrated from the neural canal to form the sympathetic system. They are influenced by the same stimuli that act upon the sympathetic nerves (Elliott, 1912) and epinephrin, the resulting secretion, influences all tissues, except the sweat glands, that are acted upon by the sympathetics, and produces the same effect as though the sympathetic nerves themselves were stimulated. This fact was finally brilliantly demonstrated by Elliott in 1905, although foreshadowed by the results of several other investigators.

The action of epinephrin, as generally admitted, except in the case of the blood vessels, is not on the central nerve cells, but in the organ or structure itself at the myoneural junction (Elliott, 1905). That the action is not directly upon the cells is inferred according to Macleod from the fact that epinephrin is "incapable of acting on tissues which are devoid of sympathetic nerve fibers, and is also inactive on those tissues in the embryo which have not yet received any nerve supply." Recent experiments by Hartman (1917), however, show that the action of epinephrin in the control of the blood vessels of the body may be exerted either in the dorsal root or sympathetic ganglia, as will be discussed later.

Biedl and Dreyer have shown that stimulation of the sympathetic fibers to the suprarenal

glands causes an augmented secretion of epinephrin. From this fact the inference follows that any condition leading to generalized discharge through the sympathetic system leads to a similar effect. Several investigators, and especially Cannon and his co-workers, have adduced positive evidence that the emotions, pain, and asphyxia, all of which lead to generalized sympathetic discharge, cause an enhanced discharge of epinephrin. Stewart maintains, however, that none of the evidence so far offered is adequate to determine the matter. It is by such "after discharge" of epinephrin that Cannon explains the prolonged bodily reaction to emotions after all superficial evidence of the operation of the exciting cause has disappeared. Dr. Pottenger has called attention (1916, 1918)) to the fact that an anaylsis of the syndrome of toxemia, as expressed in the peripheral tissues, shows its manifestations to be a result of general sympathetic stimulation. We are justified in assuming, therefore, that toxemia stimulates the suprarenals and causes them to produce an increased amount of secretion, which augments and prolongs the effect of the nerve stimulus; and, further, that severe or chronic infections may stimulate and exhaust the suprarenals. The question of inhibition of action in the suprarenal gland is one that has interested physiologists and clinicians for a long time. Hertofore nothing definite has been known, but Cannon (1920) as a result of recent investigation, states that stimulation of the afferent vagus fibers causes inhibition of the suprarenal medulla: while stimulation of the sensory somatic fibers results in increased suprarenal secretion. This is a very important contribution.

Loss of the suprarenal medulla induces no symptoms and no disease, according to the most reliable observations. However, loss of the suprarenal cortex causes profound prostration and death within a few days, in what appears to be acute Addison's disease. Grief, fright, or other forms of sudden emotion will produce glycosuria, due to the sympathetic effect upon the suprarenal glands. Also apoplectiform attacks resembling a cerebral hemorrhage have been reported when autopsy showed suprarenal hemorrhage. Addison's disease is characterized by slow degeneration of the suprarenal gland as a whole. The neurological symptoms are chiefly gradually developing asthenia with arterial hypotension, amyatrophy, depression, unwillingness to do anything, with occurence of myoclonic and epileptiform convulsions, with periodic palsies, confusional states, delirium, chronic paranoid ideas, coma, death.

Hyperactivity of the adrenal glands is very rare, usually occurring in women, but may occur in men. The more common neurological symptoms are overactivity, nervous agitation, and even approaching maniac episodes. These patients are usually precocious, but again they may be imbeciles.

The thyroid gland is innervated by the cervical sympathetic, also by the autonomic. But there is evidence to show that the secretory reflexes pass by means of the sympathetic fibers and not by the cranial autonomic ones (Cannon and Cattell) (*Am. Jour. Physiol.*, 1916). The chief endocrinopathies produced by thyroid disease are those due to lessened function, and those due to an excess of function.

Hypothyroidism is due to a variety of conditions, namely: developmental defects, vascular changes, degenerative processes of the gland tissues itself and new growth, also acute infections, psychic states such as grief, anxiety and mental strain.

In hypothyroidism the central nervous system suffers severely. The brain may show defective convolution and all parts of the central, peripheral and autonomic nervous systems exhibit the signs of retarded and deficient development. Aside from the anatomical changes in the bony development which is partly due to lessened function of the pituitary, the chief mental and neurological symptoms are in certain cases imbecility, in others dullness and apathy, the child may not be able to talk until the third or fourth year, irritability, the cranial nerves may show defective development, the cerebrospinal nerves may be deficient, the motility as well as the sensibility is diminished both as a result of peripheral and central maldevelopment.

The reflexes are not markedly changed. The gait is usually wide based and clumsy and due in part to the mental dullness. There is usually defect of memory, attention is diminished, thinking goes on more slowly, but may be of fair capacity. There is usually a loss of initiative, and emotional dullness goes along with the sensory losses and motor reluctance. The speech is apt to be slow, as are other motor acts. It is monotonous and the thickened lips further contribute to make it at times unintelligible. The whole appearance of the patient is one of gradually advancing stupidity which, if there is no relief, goes on to more profound defect states as dementia. Hearing is usually defective. According to some investigators, there is a certain amount of degeneration found in the vagus and glossopharyngeal nuclei.

We may have varying grades of hyperthyroidism, ranging all the way from apparently the normal state to the extreme type, known as exophthalmic goitre. The gland is usually enlarged and elastic, the vessels dilated and new proliferating blood vessels are found. However we may have cases of hyperfunctioning without apparent anatomical changes. We also have hyperthyroid conditions following the acute infectious diseases and acute toxic states, such as iodine poisoning. Fear, anxiety, disappointment or any other mental stress and strain are causative factors in producing hyperthyroidism as was demonstrated during the recent World War when we had an enormous amount of cases

of hyperthyroidism developed among our soldiers, thus showing the close relationship between the psychic, vegetative nervous systems, and the endocrine glands. In exophthalmic goiter we see the close relationship of the thyroid glands with the vegetative nervous system and many of the symptoms are readily seen if we have a correct understanding of our neurology. For instance, the sympathetic irritation explains the exophthalmos, tachycardia, loss of weight, and the alimentary glycosuria. Autonomic irritability causes the von Graefe, the lymphocytosis, the diarrhea, the increased secretions. The influence of the thyroids on the carbohydrate metabolism, as seen in the rapid emaciation and alimentary glycosuria, possibly acts through the pancreatic retardation or through a relative increase in adrenalin action. That the thymus is involved in the blood picture formation seems certain.

Thus one comes to a combined neurochemical theory in that exophthalmic goiter is dependent upon hyperactivity of the thyroid secretions, which increased secretions act through the visceral or vegetative nervous system. Both autonomic and sympathetic systems are thus in a state of hyperexcitability—a condition the anatomical foundations for which are found in a type of individual termed vagotonic by Eppinger.

The neurological symptoms are chiefly vegetative as seen in tachycardia, von Graefe sign, swollen eye lids, protrusion of the eye balls, retracted lids, Lowi's sign (dilation from adrenalin), irregular or stiff pupils, also loss of the accommodation reflexes. Optic nerve atrophy occasionally increased tear secretion early, with dry eyes later, also inefficiency of convergence without double vision (Möbius' sign). Usually the skin is moist, with excessive perspiration in spots is occasionally found. Vasomotor instability is frequent. Marked reddening alternates with paleness. The surface heat is usually increased. Dermographia and urticaria and goose flesh are often found, also the nails show deformities. Tremor is almost constant in varying degrees, psychical stimuli usually increases the tremor. There is a general psychomotor and emotional irritability. Moodiness and sudden changes are frequent. In marked cases distinctly manic phases may develop: again acute and deep depressions (often suicidal) take their place. Thus the picture approaches very closely at times to the type of Kraepelin's mixed manic-depressives, or the more typical circular forms of this psychosis. Toxic epiphenomena may take place with ideas of reference, or persecution, even hallucinations, principally of sight. The general picture of an acute delirium is a grave sign.

The nerve supply to the parathyroid is from the parivascular sympathetic plexus, the fibers ending on and between the gland cells. Contrary to the rich nerve supply to the thyroid, the supply to the parathyroids is very scanty.

The relation between the thyroid gland and the parathyroids is doubtful, though some authors claim that after extirpation of the thyroid gland, the parathyroids hypertrophy, but this cannot be substantiated.

As a result of degeneration or removal of the parathyroid gland, a condition known as tetany results. Tetany is a clinical syndrome characterized by a peculiar hyperexcitability of the nervous system (motor, sensory and autonomic), and in manifest cases, also by spontaneous attacks of peculiar tonic spasms, involving certain groups of muscles, or even the whole body musculature. Tetany has as its main symptoms tonic, intermittent, bilateral, often painful cramps, which without, for the most part, any loss of consciousness, involve the muscles of the upper extremities, particularly the hand, which is held in the obstetrical position. The muscles of the lower extremities may be involved also, those of the larynx, of the face, and of the jaw, seldom those of the chest, abdomen, neck, diaphragm, or tongue. In rarer cases the eyeball muscles are implicated, as is also the bladder. In the sensory sphere paresthesiæ and pains are present, while hyperesthesiæ occur now and then. Pressure upon the brachial plexus may give rise to an attack: hyperexcitability to electrical currents is present (Erb), mechanical hyperexcitability of the muscles and motor nerves is observed (Chvostek), while the sensory hyperactivity to mechanical and electrical stimuli is also present (Hoffmann). The psyche is rarely uninvolved, and following operative removal there has developed extreme anxiety with the sense of impending dissolution. The hyperexcitability of the neuromuscular apparatus is primarily due to a change (chiefly a deficiency) in the amount of the calcium in the blood, which is probably the one great function of the parathyroids.

The hypophysis is a most interesting organ, from an anatomical, phylogenetic and physiological standpoint. It is divided into three main parts, the pars anterior, usually referred to as the pituitary, and is derived from the gastro-enteron, and is epithelial in structure; and the pars intermedia, which is probably derived from the anterior portion and the posterior part, pars nervosa, or infindibulum, which is made up from neurogliar cells. The pars intermedia contributes its secretion to the cerebro-spinal fluid. There may be numerous accessory pituitary structures which have physiological significance, but this has never been determined. The whole gland is innervated by cervical sympathetic nerve fibers. Numerous disease syndromes are possible from diseases of the hypophysis, but the two best known from an endocrine standpoint are concerned with the anterior lobe, the

pituitary. These may be grouped under hyperpituitarism and hypopituitarism.

Acromegaly is characterized by the gradual enlargement of the bones of the nose, jaw, hands and feet and a hyperplasia of all of the bony structures due to an overactivity of the vegetative nervous system. This overexcitability of the nervous regulators of metabolism, from excessive pituitrin secretion, also induces hyperplasia of other endocrious structures, notably the thyroids, interstitial gonadel cells and the suprarenal cortex. From these contributory factors arise a medley (often contradictory) of thyroid, genital and vascular anomalies, some in the nature of hyperplasia, some of a degenerative or inhibitive character such as hairy and genital defects. The change in the pituitary itself is most frequently of an adenomatous or adenosarcomatous type, although this is not invariable. In pure adenomata of the pituitary the symptoms tend to be more clean-cut and classical. As a rule the whole hypophysis is implicated, which brings the posterior lobe (infundibulin) into increased or diminished activity with contradictory and mixed syndromes.

The neurological symptoms found in hyperpituitarism are most variable, due to the close connection between the activities of the pituitary gland and the other glands of internal secretion, also pressure symptoms due to the enlargement of the hypophysis. Amenorrhea is frequent in women and loss of potency in men, usually associated with atrophy of the gonads. The muscular tissues have a tendency to atrophy early in the disorder following hypertrophy.

Anomalies dependent upon thyroid alterations are frequent. These consist, for the most part, of increased sweating, tachycardia, diarrheas, exophthalmos at times, Stelwag's symptoms, irregular palperbral fissures, variations in pupillary equality, tremor, thermal alterations is apparently related to the arteriosclerosis frequently seen, diabetes mellitus or glycosuria, and other signs of altered adrenalin activity. In addition to the essential metabolic disturbances, symptoms due to the nature of the producing lesions tumor, hyperplasia, neighborhood symptoms, are frequently found, but these are not invariable. Severe bitemporal headaches are frequent. This is an intracranial pressure sign. The sella turcica is usually enlarged from tumor formation, as disclosed by the x-ray examination. Pressure upon the optic nerves at the chiams is usual, leading to various types of hemianopsia or even blindness. Distorted fields are the rule. Mental symptoms ranging from sluggishness to severe deterioration occur, but are not invariable. Epileptic attacks may occur, which may be due to intracranial pressure and not necessarily due to any abnormal secretion. Overactivity of the pituitary gland usually leads to overactivity of the other endocrine glands, and, vice versa, feeding of extracts of the other endocrine glands, usually leads to a hyperplasia of the pituitary gland.

Hypopituitarism with its varying grades also produces a very interesting train of symptoms and syndromes. Removal of the whole gland is uniformly fatal, producing symptoms of tremor, muscular fibrillation, diminution of pulse and respiratory rate, subnormal temperature, stupor and coma (cachexia hyperphysopriva acuta). Removal of the posterior lobe does not cause death or any special symptoms. Complete removal of the anterior lobe results in death to the animals. Separation of the stalk causes death. Partial removal of the anterior lobe causes obesity. Cushing and his collaborators made the additional observation that the obesity was of the character found in the condition described as dystrophia adiposogenitalis since it was associated with genital atrophy; and they further observed that in young animals persistent infantilism occurred after partial removal of the anterior lobe. The same observers also noted that the subnormal temperature, which is a symptom in dystrophia adiposogenitalis, could be raised by an injection of an extract made from the pars anterior. This phenomenon they referred to as the "thermic reaction". The increased carbohydrate tolerance, studied by Goetsch, Cushing and Jackson, and the low blood pressure, symptoms of posterior lobe deficiency, they were able to relieve by injection of infundibulum. W. Blair Bell in some recent animal experimentation, was unable to produce the syndrome of dystrophia adiposogenitalis by the partial removal of the pars anterior, although it followed compression and separation of the stalk; however, in both instances the genital syndrome developed.

Manifestations of psychic disturbances may result from increased intracranial pressure, especially from a growth involving the temporal and frontal lobes, and form insufficient glandular secretion. Some of the former have been enumerated under neighborhood symptoms, but in addition, states of excitement, depression, psychoneurosis, and even hallucinations may develop. Lassitude, torpidity, and drowsiness are among the earliest symptoms. Lesions involving the frontal lobes gives rise to such symptoms as impairment of memory, disorientation, untidiness, apathy, and stupor. Children suffering with hypopituitarism are usually temperamentally dull and apathetic, and are backward in their studies. They are usually irritable and often have difficulties with their playmates because of their lack of self-reliance and self-control. As a result of insufficiency of the pituitary gland mental symptoms frequently develop which vary from a mild psychosis to advanced forms of epilepsy and insanity. Beverly Tucker ascribes to the pituitary certain psychoses of

adolescence some of which he attributes to hyperpituitarism, others to hypopituitarism. The latter he divides into two groups. The commonest psychosis resembles dementia præcox. The preadolescent symptoms are negligible. The patients begin to be dull in their studies, seclusive, and self-absorbed. Repetition of movements is common; hallucinations and delusions may or may not be present. They have difficulty in expressing themselves in writing, and are usually unemotional and unaffectionate, and obstinate and irritable when disturbed. There is thickening and enlargement of the clinoid processes but the sella is about normal in size. To another group belong those cases in which the psychosis is not very profound. It consists chiefly of irritability, mental dullness, tardiness, truancy, and general lack of ambition, and in some cases epileptiform seizures. Roentgenograms show a small crowded fossa. A special form of hypophyseal psychosis has been described with confusional states and narcolepsy as the chief symptom (Tom Williams). Other psychic manifestations are lack of emotional inhibition, highly excitable states alternating with sluggishness, frequently phobias and compulsions, and moral and sexual obliquities, characteristics modified by pituitary feeding (Timme). The narcoleptic attacks are not attributed to a secretory disturbance of the pituitary gland. They are a part of a syndrome in which symptoms of cardiovascular irregularities occur; namely, tachycardia, arrhythmia, extrasystoles, embryocardia, and hypertension in addition to polyuria and polydipsia; according to the experimental observations of Ashmer J. Camus and G. Roussy the entire syndrome can be produced by excitation of the tuber cinereum and infundibulum. This view is supported clinically by a case in which at autopsy the hypophysis was normal, but a tumor of the third ventricle was found.

It has also been shown experimentally that if the whole gland or a very large portion of it be removed, profound somnolence is apt to develop. This is associated with a subnormal temperature, slowing of the pulse and respiration, and diminished sensitiveness to pain, symptoms which frequently improve on the administration of pituitary gland substance. Somnolence has a tendency to occur periodically, sometimes daily aside from the habitual sleeping hours, and then again with days intervening during which they respond fairly normal, and the sensorium is reasonably clear. It is this condition which suggested the possible relationship between the function of the hypophysis and hibernation in animals as first pointed out by Gemilli (1906) and later emphasized by Cushing. Persistent yawning, which often accompanies drowsiness, is a characteristic feature. The entire syndrome of somnolence, yawning, dullness, apathy, etc., with the presence of a clear sensorium shows a striking analogy to that of encephalitic lethargica. The fluctuating character of the former and the mode of onset are the chief differentiating features. Attention has been called by Cushing to the relation of epileptiform seizures to lesions producing hypopituitarism. The so-called uncinate attacks are caused by a lesion extending into the interpeduncular region, producing pressure on or irritation of the uncinate gyrus. The aura is characterized by hallucinations of taste and smell. Sometimes the gustatory and olfactory phenomena with temporary loss of memory constitute the attack; at other times the attacks are more complete with marked convulsive seizures. General epileptiform seizures, which occur without uncinate factors, are probably due to glandular insufficiency, the result of hypoplasia. On the relation of epilepsy to pituitary disorders the following is quoted from Cushing: "One may reassemble the data in regard to the possible relation of hypophyseal insufficiency to epilepsy as follows:

"1. Horsley, it will be recalled, in his first experimental hypophysectomies in the canine observed no post-operative changes whatsoever in the condition of the animals. They were, however, used subsequently as subjects of cortical stimulation, and he noted that the motor cortex was unusually excitable.

"2. As already stated, we have observed a tendency to epileptiform convulsions in a number of our animals kept for long periods after partial hypophysectomy—animals that ultimately exhibited symptoms which we attribute to glandular insufficiency.

"3. The study of a series of cases of hypophyseal disease in man has shown that epilepsy —a symptom unobserved in states of hyperpituitarism—is a frequent accompaniment of clinical conditions in which an insufficiency of the gland is manifest. Moreover, that the brain, under these circumstances, is possibly overexcitable is suggested by the number of individuals in whom gustatory attacks have occurred under the influence presumably of a direct local irritation of the adjacent uncinate cortex by the enlarged gland.

"4. As is well known, epilepsy is a frequent sequel of cranial injuries. In certain types of injury, as the common bursting fractures of the base, the pituitary body is prone to be damaged.

"5. If, as we believe to be the case, the posterior lobe secretion normally enters the cerebrospinal fluid and thus comes to be in solution in a fluid which subsequently bathes the cortex, it is possible that its diminution from hypophyseal disease or injury may unfavorably affect the activity of the cortical cells. On this basis it is conceivable that a local scar which involves, or a tumor which presses upon, a given area of the cortex, may prevent the access to the cells of a substance which is essential to their functional stability.

"6. Many individuals, supposed to be suffering from so-called genuine or essential epilepsy, present manifestations of a nutritional disorder —a tendency to adiposity and a high sugar tolerance, coupled with a lowered temperature and pulse rate, closely akin to the constitutional state which characterizes hypophyseal deficiency. In some of these individuals the administration of hypophyseal extract has served to moderate the seizures from which they previously suffered."

Johnston, basing his opinion on the x-ray findings of the sella turcica, states that the factor chiefly concerned in a certain group of cases of epilepsy is a mechanical one. The small roofed sella which encroaches upon the gland interferes with the normal blood supply and psysiological activity, in consequence of which the animal economy is deprived of those substances produced within the pituitary, necessary to stimulate normal metabolism. He substantiates his view by the fact that these cases are benefited by pituitary feeding, and suggests that relief might follow the resection of the clinoid processes; in other words, by a sellar decompression. Numerous other researches have been made along this line, the results of which are too vague and indefinite to enumerate.

The secretion from the posterior lobe of the hypophysis is poured into the cerebrospinal fluid, though some investigators contend that part of it is poured into the blood stream directly. At any rate, the effects of the secretion of the posterior lobe are undoubtedly pressor, producing vaso constriction, peristalsis, also contraction of other smooth muscle as the uterus and bladder. This action is most probably due to a stimulation of the sympathetic nerve endings in the smooth muscle.

The most outstanding symptoms of posterior lobe deficiency are hypotension, increased sugar tolerance, diminution of basal metabolism, and asthenia.

The gonads are composed of two types of cells, those cells having to do with reproduction, the gamete cells in the male and the Graafian follicle in the female, and those interstitial cells of Leydig which produce a definite internal secretion. This interstitial hormone acts as a connecting link between the soma and the gonads and through this specific action, particularly marked in the male, exercises a direct and specific stimulus upon the somatic structure of the body, thus increasing growth activity, causing definite lines of development, varying in sexes, and so affecting the whole muscle and nerve metabolism as to produce profound and far-reaching alterations. It is extremely difficult in the present state of our knowledge to discuss, in an intelligent manner, the relationship between the sex glands and the vegetative system. Both ovaries and testicles are innervated by sympathetic nerves, and the secretion from the testicles, according to Wheelon, is sympathicotropic, while that from the ovary seems to be different, as shown by Hoskins and Wheelon. Castration of males caused a lowered irritability of the sympathetic system, whereas spaying of the females caused a heightened irritability of the same system. Wheelon and Shipley estimated that castration of males lowered sympathetic irritability by fifty percent. The internal secretion of the ovary, or at least that of the corpus luteum, is also sympathicotropic, if we may judge from the clinical symptoms which appear preceding the menstrual flow and those at the beginning of pregnancy or after cophorectomy, when the menstrual cycle suddenly ceases, or at the climacteric, when the secretion is gradually withdrawn. During the latter half of the menstrual cycle the secretion from the ovary exerts a marked nervous and psychical influence upon the patient. This influence, as expressed through the vegetative nervous system, seems to be preponderantly that of sympathetic stimulation. The pulse usually increases in rapidity, the blood pressure becomes higher, the temperature is elevated, and a slight neutrophylic hyperleukocytosis is noted. While these symptoms may be evidence of increased sympathetic stimulation, we cannot claim that they are wholly due to direct stimulation of the sympathetic nerves, because this physiologic process makes an impression upon other organs of internal secretion, such as the thyroid, pituitary, and suprarenals, and upon the nervous system as a whole, and probably, most of all, upon the psychical centers. Immediately following the commencement of the flow, a general relaxation of tension takes place. Nervous and psychical irritability disappear, the pulse becomes less frequent, the temperature drops, and blood pressure falls.

The gonad syndromes are so interlinked with those of the other endocrine glands, especially suprarenal cortex, the pituitary and the thyroid, that it is difficult to single out any set of symptoms and ascribe them to gonadal dyscrasias. The symptoms vary considerably, depending upon the age of the individual when the (usually surgical) loss of the gonads takes place. In early loss in the male (castration before puberty, destructive orchitides) the penis, prostate and seminal vesicles remain small, erotic desire fails to show itself, and potency is lost. In the female a similar failure of development takes place. The girl is apt to grow tall, boyish in type, with infantile secondary characters. Later loss, after puberty, tends to increase the size of the skeleton—a tall, thin, type and short, fat, dumpy type with broad hips, female fat distribution on the breasts, buttocks and iliac crests. The lower extremities develop disproportionately more than the upper, or vice versa. The head is flattened behind, the sella turcica widened, the superciliary ridge is apt to be prominent. The skin is usually smooth, cool, marble-like, poor in pigment and color; the hair

of the head usually thick while that of the face is absent or only downy, that of the pubes follows the female type of distribution—horizontal. Small thyroids, thymus, larynx, and wide pelvis are the rule. The average castrate is apathetic, with shambling gait, bent in his posture and a sleepy or indolent mental attitude. The face is usually fat, with puffy eyelids. The voice is high and thin. Erotic desires are not always absent nor is intercourse impossible, even though the penis is apt to be small. The female—artificial menopause—tends to grow stout and irritable, autonomic tonus is lowered, ptoses are frequent, vasomotor instability, with hot and cold flashes, with darting, jumping pains, anxiety, nervousness and flightiness develop.

The pineal gland, the island of Langerhans of the pancreas and the thymus gland are all considered endocrine glands. They are all supplied by the parasympathetic nerves. Their hormones have to deal with metabolism and probably have a very small role to play in a neurological way and should be treated from a medical standpoint rather than from a neurological way.

In conclusion, I wish to say that the clinical syndromes resulting from disease of the glands of internal secretion are almost always, or, I might say always, pluri glandular. The close relationship between the glands of internal secretion and their products with the vegetative nervous system, has been dwelt upon. The psychotic and the neuropsychotic symptoms have been enumerated in taking up the individual glands and their syndromes. The great effect of emotional shock, infection and toxemia upon the glands of internal secretion and their resulting effect upon the vegetative nervous system has been shown.

It would seem that a group of organs—the endocrine glands—which have in their power the regulation of the normal growth of the body, the proper development of the nervous system, the appearance of secondary sex characteristics, the reproductive cycle, metabolism, whether the individual shall be feeble minded, or highly intelligent, a sissy or a he man, a bearded lady or a woman endowed with purely feminine attributes, determines an individual's personality and his reaction to his environment must be highly respected.

I must admit, the field of endocrinology is in a state of chaos. There are many contradictory theories and glandular therapy so far is merei, empirical, but out of the chaos I am sure orderly facts will follow. The field is still open for investigation and indeed it is a most fascinating one.

SURGICAL ASPECTS OF ENDOCRINOLOGY*

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The discovery that there is a chemical control of bodily function in addition to a nervous control has appealed powerfully to the imagination of workers in the experimental and clinical fields of medicine. No subject has been more written about than the function of the ductless glands. The bibliography of endocrinology fills five hundred pages. There is a special journal of endocrinology and a special association for the study of internal secretions. This activity has had a great influence on the practice of clinical medicine and surgery. In fact there are indications that it is having an influence which is not entirely beneficial. It is time to consider how much we actually know about the glands of internal secretion and how much of this knowledge we can safely use in actual practice.

For such evaluation the symposium on endocrinology held at the last meeting of the American Medical Association furnishes adequate material. At this, Barker, Cannon, Aub, Carlson, and Hoskins presented papers, and Roundtree, Wilson, Boothby, and others took part in the discussion. The papers were excellent and the criticism was keen, even acrimonious at times. These men should know the subject if anyone does, and yet I am sure that if any of you will read the published account of the symposium, the one overwhelming impression you will receive is that the subject is at pesent in an extremely chaotic condition. The essayists and discussants themselves repeatedly emphasize this fact. Indeed Carlson's paper is devoted to showing how little evidence there is for many widely believed hypotheses on internal secretions.

Endocrinology consists at present of a few well-established and indisputable facts, a greater number of supposed or undemonstrated facts, and a vast amount of speculation, most of it without adequate foundation.

Says Carlson: "* * * * practically every statement made in regard to the ductless glands today requires qualification." Says Roundtree: "Endocrinology is still young. It is still far from a science." All that is actually known about the internal secretions can be, and is, stated in any good text book of physiology in six or eight pages.

A sense of ignorance is the beginning of wisdom, in endocrinology as in any other branch of learning. All serious workers in this field emphasize the point that what is needed is the patient collection of facts. They also emphasize the extreme difficulty of making progress, to which they consider illgrounded speculation a great obstacle.

(*) Third paper of symposium on Endocrinology presented before the Indiana State Medical Association at the Muncie session, September, 1922.

Notwithstanding the above considerations, every physician should learn all he can about the function of the ductless glands. It is beyond doubt that they govern (1) the growth and development of the body; (2) the sexual functions and the development of the sex characteristics; and (3) that they have a controlling influence on metabolism. No one should today practice surgery without a knowledge of these important facts, but this knowledge should be controlled by a realization of how little we know about the means whereby the ductless glands exercise their functions. The limits of time forbid that I consider in detail the manifold points of surgical interest of the pituitary gland, the thyroid, the pancreas, the adrenals, the sex glands, etc. Such a review would, under the limitation of time, be haphazard and sketchy. I must be content to consider the correct attitude of the surgeon toward diseases, and supposed diseases, of these organs, and how he should proceed with the study and treatment of the individual case. A study of first principles is especially indicated in a branch of surgery so confused and uncertain as this.

An eminent clinician has recently pointed out that much of the uncertainty arising in the study of diseases of the ductless glands is due to confusion of clinical syndromes with theories as to the cause of the same.

In other words we start with a theory of what is causing the patient's trouble and make the physical findings and case history fit the theory. Such placing of the cart before the horse is, of course, a mistake liable to be made in the study of any complaint, but it is peculiarly common in the romantic and fascinating field of endocrinology. It would seem that many men who have pondered over much on this subject have become victims of systematized delusions about it, so persistently do they search till they have fitted every symptom they observe into some endocrine complex.

At the risk of seeming to explain the obvious, I wish to insist that safety in this field lies in first collecting every possible bit of information about the patient, from case history, physical examination, and laboratory tests. Not until these data have been critically examined, the proper relative importance assigned to the individual facts, and everything which is not certainly true rejected, should the clinician seek to discover a cause for what he has observed. Finally a diagnosis of disease of the ductless glands should not be made till every other possibility of diagnosis has been excluded.

In a branch of medicine so uncertain and theoretical as this, these rigid criteria are necessary for safety and progress.

We may illustrate the foregoing principles by considering the study and treatment of so-called hyperfunction of the thyroid. I select a disturbance of this particular organ because more is probably known about the thyroid than any other ductless gland.

Suppose a patient presents himself with a history of extreme nervousness, loss of weight and strength, sweating, diarrhea, increased heart action, etc., and that on examination we find that he has exophthalmos, certain characteristic eye signs, an enlarged and vascular thyroid, a rapid pulse, muscular tremors, and a greatly increased metabolic rate. This is a well-known syndrome which we call Graves' disease. So far we are on safe and certain ground. Beyond this point speculation begins. What is the cause of Graves' disease? "Hyperfunction of the thyroid with production of an excessive amount of its hormone, which causes an accelerated oxidation in the tissues, which produces the clinical manifestations observed," you may answer. You may add that the truth of this argument is proved by the fact that when in such cases the activity of the thyroid is diminished by diminishing its blood supply or by excising the greater part of the gland, the disease is cured. That these surgical measures greatly benefit most cases of Graves' disease is perfectly true, and this is an unanswerable argument for their use. Nevertheless it does not prove that hyperfunction of the thyroid is the cause of the disease. This is only one of several possibilities. The disease may be caused by the excretion of a toxic substance by the thyroid, or it may be produced by stimulation of the thyroid by some unknown agency. We are unwise if we do not at least keep an open mind on this matter. For there are things we do not understand about Graves' disease, *e. g.*, why the symptoms associated with adenoma of the thyroid are not altogether the same as those of exophthalmic goiter, and why all patients are not cured by thyroidectomy performed in the early stages of the disease.

While for practical purposes the management of a fairly typical case of Graves' disease is reasonably satisfactory, what can we say of the diagnosis and treatment of cases which present only a few of the manifestations given above? Suppose the chief symptoms are increased heart rate and nervousness without enlargement of the thyroid? Or some enlargement of the thyroid and auricular fibrillation? Or general weakness and increased heart rate? In cases of this kind we should be especially careful not to let our idea of the possibility of the presence of hyperthyroidism blind us to the possibility of other causes, as pulmonary tuberculosis, various nervous disorders, the presence of latent infection, and possible physiologic activity of the thyroid.

In light of the foregoing considerations it is unnecessary to discuss such surgical procedures as thyroidectomy for the cure of dementia præcox, adrenalectomy for the cure of epilepsy, or ligation of the vas in old men for the restoration of virility.

The principles illustrated in the case of the thyroid are a safe general guide in the surgery of the other ductless glands. It should be borne in mind, however, that with the pancreas, adrenals, and sex glands, the matter of chief surgical interest is that of insufficient function, *e. g.*, diabetes for lack of sufficient pancreatic tissue, Addison's disease from destruction of the adrenals, and the symptoms of a premature menopause from loss of the ovaries. As yet the surgery of these organs is most important from the prophylactic standpoint. Grafting of ovarian tissue I regard as a justifiable operation because it is attended with but little danger and may do good.

The foregoing remarks have been meant to apply to surgical diagnosis and treatment having for its object the relief of disturbed function of the endocrine organs. They apply only indirectly to operations on these glands when they are the seat of tumors or other grossly demonstrable disease. One well established fact makes such operations safe in nearly all cases. This is, that nature has provided a great excess of tissue in the case of every endocrine gland. This excess is six to eight times the normal need of the body for the particular function involved.

SUMMARY AND CONCLUSIONS

In this paper I have emphasized what I regard as the most important aspect of endocrinology from the standpoint of the surgeon. This is the uncertain and fragmentary state of our knowledge about it. In the dark we must move cautiously. Therefore in the diagnosis of supposed endocrine disease, or in the operative treatment of the same, we must employ the most rigid criteria of judgment, and not allow theories of endocrine function to influence us, for today the truth of these theories is almost without exception undemonstrated.

These conclusions do not dispute the great physiologic importance of the endocrine glands; and should not discourage study of their functions. This study should be undertaken, however, with a realization of the extreme complexity and difficulty of the subject.

DISCUSSION

DR. EDGAR F. KISER (Indianapolis): Endocrinology is a science in the making and I am sure it is to be regretted that there is a tendency on the part of many men to decry it as merely a passing fad. Personally, I predict for the future of endocrinology an enormous place in medicine, and I speak of this from the medical side only. The very fact that Dr. McCaskey has been able to present such concrete facts concerning the thyroid is pretty good evidence in itself that with the passing of time and with the study which we will be able to give the relation of the so-called ductless glands, we will have very nearly as definite a statement to make concerning other of the endocrine organs.

Perhaps the outstanding factor in bringing endocrinology into disrepute at this time is the unfortunate over-activity of some men who are exploiting it commercially. Our desks are covered with advertising literature coming from the far West and from the Atlantic, calling our attention to capsules containing this, that or the other substance that will do everything but grow hair on a bald head, and I think the disposition of most men is to jump to the conclusion that anything which is exploited in this way is of but passing interest. I am very sure that with the work that is being done by the better men throughout the country we will within a comparatively few years be able to interpret very intelligently the hyperfunction or the hypofunction of most of the glands of internal secretion.

The problem at this time of course is the matter of treatment, particularly the treatment of those diseases in which there is hyperfunction of some of the endocrine organs. Hypofunction is being satisfactorily met, especially as regards five or six of the more important endocrine organs. We know exactly what thyroxin will do, and what dessicated thyroid will do within certain limits. Personally, I am enthusiastic about the administration of ovarian substance. I believe in properly selected cases we have in ovarian substance a remedy which has been a God-send to a great many women. The use of pituitary substance I do not know so much about, except of course in obstetrics, where it has a limited field.

I am looking forward with eager anticipation to the further development of the work which McLeod of Toronto and his co-workers have recently done on the pancreas. In the *Boston Medical and Surgical Journal* some three months ago was a letter written to the editor by Joslin, discussing this work and speaking of it in such enthusiastic terms that I could not help but feel, coming from such a conservative man as Joslin, that before many months *insulin*, as McLeod has named his product, might offer the possibility of cure in diabetes, which as we know up to this time has been an utter impossibility.

It is such work as this, coming from men at the very head of the profession, that leads me to believe that it is only fair and right that we should judge endocrinology upon its merits, and neither accept nor reject the science as a whole until such time as it has proved itself.

DR. ALBERT E. STERNE (Indianapolis): I think you will agree with me that we know some well-recognized physiologic facts as to the function of the various glands, but these facts are loosely strung together. The influence of the one upon the other is not clearly understood, and the present situation is chaotic and altogether unsatisfactory. A great many men think that they have solved a certain number

of our problems, but therapeutically, at the bedside and in the consulting room, our results do not by any means agree with the demonstrated facts in the physiologic laboratory. It does not work out, and probably for a very simple reason. The human body, with its complex mechanism, is decidedly different from a set of retorts or test tubes or any laboratory apparatus. Therefore what we see, at the bedside, of the phenomena which occur in diseases of various kinds is difficult to total and assimilate with known, demonstrated facts of the physiologic laboratory.

Hypotension is apparently easily met. On the other hand, hypertension has been comparatively illy met in the consulting room and at the bedside.

Another point which I want to barely mention is the fatal influence upon the individual, upon the mechanism of the body, upon the growth of the nervous system, of impairment in function of the chief glands of the endocrine chain (and remember that no link in that chain can be disturbed without influencing the whole chain), except those which have to do with the reproduction of species. That they have an influence is true, especially if they are removed early in life. I question very much, however, whether there is a marked gonadal influence late in life. I think that is largely superstition, and while it may be that ovarian extract has been a God-send, as Dr. Kiser has said, I have been rather convinced that most women come to the climacteric or any disturbance of the ovaries (and men relatively in the same way) in what you might call a psychic state. They think that something ought to occur—they are told it ought to occur. I cannot conceive, gentlemen, of a normal physiologic phenomenon like the climacteric leaving behind any marked disturbance, unless there is something wrong with the individual aside from that. So I believe it is largely a superstition that has been handed down. Women discuss it in their societies—they have an idea that at the climacteric something must show itself from the psychic or nervous side, and then if the doctor can convince them that ovarion secretion or any of the gland products will have a good effect, to some degree they may be relieved.

Practically all operations upon the endocrine system—surgery of the thyroid for instance—are empiric. The same is true of our medication in these cases. There is behind the manifestations, behind the group of complex phenomena in diseases of this system, something else. I think Dr. Emerson correctly touched upon that. It is the primordial nervous function that is fundamental. I, for one, am inclined to regard the ductless glands as a part of the autonomic-sympathetic nervous system, rather than glands *per se*. The integral relationship is so close that it is indeed difficult to determine, even speculatively, which function is primary and which is secondary. The same truth is apparent to me in medical therapy—that in this particular phase of medicine we are dealing empirically with whatever trouble suggests itself.

We may successfully operate for hyperthyroidism by Basedow's disease by removing part of the gland, or by ligation perhaps; but herein we relieve only certain definite toxic effects which are a part only, albeit an important part, of the whole clinical syndrome. The Basedow complex still remains well defined after the operation. This operation has relieved, but not cured. It was an empiric measure.

DR. CHARLES P. EMERSON (Indianapolis): We are fortunate in listening to so splendid a review of the literature of this subject. As Dr. Sterne has mentioned, this literature is so voluminous that one must be cautious when selecting those whose authority he would follow.

In that connection I should like to make a plea that we get away from the old German physiological school and be loyal to the clinical school, for although the one will, or should, use as many test tubes and guinea pigs as the other (for without laboratory work there would be very little advance except in empirical medicine), nevertheless the difference between them is that the German school believed medicine was advanced in the laboratories and that what is proven in the laboratory is proven for the patient, while the clinical school realize that they must start at the bedside and in the laboratories seek the explanation of what they find there. In the field of endocrinology especially is this distinction important, for our ideas on this subject have become very confused because so many of them were gained from the study of animals and may or may not be true of men, and yet much of this animal work is the only ground for the many remedies on sale for these disturbances of the glands of internal secretion. The dealers say to us, "Test our products on your patients." The manufacturers make their preparations and ask practicing physicians to "test" them. Personally, we doubt that much progress can be made testing remedies on our patients about their work—the housewife with her domestic duties—the man with his professional or business cares. There are too many factors to consider. The manufacturers have no right to flood the market with all these preparations until they have been reproven under proper test conditions and with proper patients. That is, it seems to me that a society like this should have these drugs tested and then say, "Now you may sell your product." We are discredited by the things that have been tried on the public in years gone by and then abandoned. We may change our opinions as to certain drugs, but the public only remembers that we did recommend them ten years ago, and therefore we suffer.

Our subject is "The Endocrine System and the Central Nervous System". I am one of those who do not believe that the thyroid gland *controls* anything; it does it under control. I do not believe the adrenals *control* anything. I do not believe the rituitary gland controls anything. Of course if you use the term "control" in the same sense as we do of our automobile machinery when we say this lever "controls" the air, this "controls" the gas, well and good; but these little levers and switches do not run the machine. By means of them I run it. When as a boy I rode a velocipede it did not have levers and switches, but I rode it; then came the high bicycle, then the safety, each a better machine. Now I drive an automobile. The driver is the same. I rode before; now I ride better and have a better machine. Let us carry this argument into comparative biology. If an automobile concern should buy a shoe factory, we would expect the output to be automobiles, not shoes, and yet would see that the shoe factory was the older industry. Now from an embryological point of view what do we find? We find the thyroid gland was in lower animals a mucous gland whose secretion was useful to the tongue, but when the higher animal came into being he commandeered that factory for a very different purpose and made in it a certain internal secretion of immense importance to the body. We find that part of the pituitary gland originally belonged to the nose. Later nature commandeered that factory for a different purpose, in fact, to control sex life and body growth. It is said that the pineal gland was once an eye. In other words, if we believe in comparative embryology at all we must recognize that the nervous system is older than the organs and has used them to suit her changing purposes. These organs do not control; they are merely the machinery which has been developed for this purpose. Today we hear so much about internal secretions since the manufacturers can sell them to us. If they could sell us autonomic nervous systems undoubtedly they would.

Until the medical profession is willing to recognize the fallacy of this scientific period and go back to Greek medicine, which sought the agent behind the machine, until we realize the immense importance of the emotions in controlling body functions, we will not be able to handle this question of the internal secretions satisfactorily.

We must remember that there is no proof that thyroxin is the hormone of the thyroid gland, although we know that it is a very potent drug manufactured from the thyroid gland; that there is no evidence that adrenalin is a physiologic product, although it is a very valuable drug and we could scarcely get along without it. But we must be careful in discussing this subject not to identify a drug made from a gland which may give almost the physiological action of the gland as necessarily the physiological hormone of the gland. But even if they were the true hormones their production represents the activity of the central nervous system, which controls the activity of that gland. We have the great emotional side of our patients to deal with, and if a man is not willing to consider that first, I do not see how he can expect to get very much from using these internal secretions.

The matter is in chaos, and yet we doctors are in a certain degree the "goats". We are the ones who sell the public an immense amount of "internal secretions" products. We certainly get no profit from it now and we certainly will get a great deal of criticism if later we abandon them. We have no right to advise so much therapy of unproven value.

The point I would like to make is this: The real education of the public must begin in the State Medical Association, and this Association must be very careful in determining what it should teach the public and what it should not. If we can get the confidence of the public by proving accurately, first the things we prescribe, then I believe they will obey a great deal more readily when we suggest surgery, for instance in carcinoma.

We are discussing, not internal secretions in general, but the nervous system and the endocrine organs, and we believe it is the nervous system which controls the function of the endocrine glands. You may say this is a quibble concerning the term "control". It certainly is more important than a quibble, since the misuse of that term has led to the experimental use of a great deal of glandular extracts which have never been thoroughly proven. I happen to know the very first man in the world who was ever saved from myxedema. I knew him twenty years after, and he still used thyroid tablets. Try to get the better of him in an argument and you must needs be pretty bright. But here is the point—that drug was first proven experimentally on animals, second, it was reproven on man, and third and lastly it was put into general use. If we had waited for that proof in the case of a lot of these other things on the market, they would not be sold today.

DR. TOM JONES (Anderson): Dr. Gatch was entirely right when he said that from a surgical standpoint, endocrinology is in its infancy. To my mind, with the possible exception of surgery of the thyroid, the surgical phase has not yet been born. When you consider all the different theories you can readily see that the surgery of the ductless glands cannot yet be placed upon a solid foundation. It is necessarily destructive rather than constructive surgery, and deals principally with the hypersecreting glands. It is comparatively easy, purely

from the standpoint of hypersecretion, to destroy part of a gland and stop the excess output of the extract. Theoretically that is true; practically, it is not. Even in surgery of the thyroid we know that many times after the thyroid has been removed the symptoms are not improved. Why is it? That is a question that has not been answered satisfactorily. To my mind, any surgery of the ductless glands, with the possible exception of the thyroid, is extremely meddlesome surgery.

DR. CHARLES H. GOOD (Huntington): We have certainly had a very scientific discussion of the subject of endocrinology, and as general practitioners we know that corpus luteum is a valuable remedy, we know that ovarian extract is a valuable remedy, that thyroid extract and adrenalin are marvelous, but when it comes to pituitary extract I think it is the most marvelous in the history of medicine, and the man who discovered it should rank along with Harvey, Pasteur and Lister, and have a monument in this country. But in the hearts of the mothers of this country pituitary extract will live without a monument.

DR. G. W. SPOHN (Elkhart): Dr. Gatch was understood to say that nature has made provision for the tissues of the body—that is, that there is five or six times as much tissue as is needed. In other words, the thyroid gland has five or six times the capacity the system needs. If he can prove that I wish he would do so.

DR. CHARLES S. BOND (Richmond): I want to compliment the authors, especially the surgeons, upon the very conservative view they take of this proposition. Just a few years ago we went to the other extreme, but now we are coming back, and I think it will be a benefit to the human family. We all have our horizons. We all go into the sickroom, draw the curtains down on all sides to conform with our individual eccentricities, and make a diagnosis according to our view. That view may be very extensive, or it may be based on very little knowledge. Every doctor is more or less subject to mistakes because of his viewpoint. Conservative medicine certainly would be the proper standpoint for the men of this Association, because we will be making mistakes which will count more than not to give medicine at all, or not to do surgery at all. The great trouble now is that we are overdoing everything we undertake. Thyroid extract was introduced, and we used it to excess; the same with pituitrin. We will have to get away from that proposition before we get down to the real facts.

In regard to surgery of the thyroid, you know how many different views are already taken. In the first place, there is disturbance in the body outside of the thyroid, brought about by excess in some particular way, and the thyroid is affected. It makes too little or too much iodine. Do you take out a part of a radiator to stop the heat from coming from the basement? Everybody would say that is very inconsistent, although for the time being the room is less heated. But would it not be better to go down cellar and put out the fire? We are coming to the point where we must not consider single, isolated facts, but all the underlying facts connected with this subject. Not one gland only, but the other glands involved. We must take the body as a whole and study it from that standpoint, not from isolated facts either in medicine or surgery. Then will we come nearer the truth.

DR. GEORGE F. KEIPER (Lafayette): Dr. Bitler touched on one phase of this subject that I think is worthy of very serious consideration—the relation of the endocrine organs to personality. Personality has to do with mentality, and mentality has to do with psychology. Psychology has to do with the individual nerve cells of the brain, the central nervous system. We have learned that it is very hard to tell where body leaves off and mind begins, where physiology ceases its work and psychology begins. If we go into the laboratory for study of the mind we find it is based upon the study of physiology, and the students are started along that line. Max Nordau in his work on "Degeneration" says that after all memory is nothing more nor less than the product of stored-up nerve cell action. So all our psychological processes are the product of nerve cell action. If these endocrine bodies have anything to do with our psychologic processes, and they evidently have, it certainly behooves us as physicians dealing with the mental states of our patients to enter into a very serious study of these endocrine bodies.

DR. CHARLES STOLTZ (South Bend): I have watched, as an innocent bystander, this endocrine theorizing since the days of Brown-Sequard, and it seems to me that most of the stuff is the result of laboratory juggling and ought not to be released from the laboratory until better digested. Then we would not get into such a hopeless muddle.

DR. J. R. EASTMAN (Indianapolis): This has been one of the most remarkable exhibitions of therapeutic nihilism that I have ever witnessed. I believe that much practical good has been accomplished by the study of endocrinology. For example, I believe that we are today in a very much better position with relation to the treatment of toxic thyroid glands than we were twenty years ago, and I believe that a great part of the credit which redounds to the medical profession for this advance is owing to the surgeons who have devoted themselves to the practical study of thyroid disease. I would not be true to my guild did I sit here and willingly permit the impression to remain in your minds which I suspect is there now,

namely, that surgery accomplishes very little in dealing with thyroid disease. I am one of those who believe that a tumor of the thyroid gland may represent the monkey wrench which can disarrange the whole endocrine machine; and I am one of those who believe that often by a simple surgical procedure the monkey wrench can be removed, followed by the smooth running of the machine. Just ask yourselves this question, you older men, you silver-tops here—What was done with toxic thyroid disease before men like Charles Mayo, the elder Kocher, Crile, Miles F. Porter and other men established the surgery of toxic thyroid upon a fairly rational basis? What did we accomplish before their time, and what is accomplished now in the treatment of thyrotoxicosis?

Reference was made to hemi-thyroidectomy in the disease dementia præcox. Inasmuch as no one knows very much about dementia præcox, I venture to say that with the syndrome of dementia præcox in an individual with large thyroid gland, one is justified, if symptoms do not point elsewhere, in assuming that the thyroid gland represents a focus of irritation, a site of endocrine imbalance, and as the removal of the large lobe can do the patient no harm, one is justified in performing a hemi-thyroidectomy in such a case. The results have proven that for some reason these cases do sometimes actually get well. I have personally had several cases of dementia præcox of the agitated type, with goiter, but without true thyrotoxicosis. Three of these patients had been condemned by lunacy commissions; two had been confined in insane hospitals, and yet four such patients after hemi-thyroidectomy are back at their former occupations as school teachers, stenographers, etc.

So I wish to sound this note: We are not altogether in chaos; some good has come out of the study of endocrinology; some good has come out of surgery in thyrotoxicosis.

DR. CHARLES A. SELLERS (Hartford City): It is a deplorable state of affairs when a surgeon is obliged to make the statement Dr. Eastman has made regarding the relation that exists between dementia præcox and thyrotoxicosis or exophthalmic goiter. There was a close relationship between the symptoms of thyrotoxic goiter and dementia præcox in two of my cases, but they were diagnosed as thyrotoxicosis and not dementia præcox. If we are watchful with our patients (and the general practitioner is the one who sees these toxic cases first) we should never make the mistake of sending anyone to the insane hospital when he or she has a thyrotoxic goiter.

As general practitioners we have not given the very early symptoms of disturbed thyroid the attention they deserve. Of course we all believe that the ideal method of handling goiter is to prevent it.

There is not much question that these cases should be handled surgically, but it must be remembered that exophthalmic goiter cases continue to be exophthalmic cases; they are not cured, but surgically relieved.

Thyrotoxicosis in the beginning is curable with rest, but we general practitioners are not giving this method of treatment the thought it deserves. If we could give these patients as much rest as the surgeon does, I am quite certain that we could cure many a case that otherwise would eventually result in a surgical exophthalmic goiter.

DR. GRACE L. HOMMAN (Laporte): I heard Dr. Sterne say that the disturbances which come on at the menopause are psychic. I believe that is not true. He admits later on that the endocrine glands have much to do with the nervous system. I cannot quite understand why we should not have some disturbance when the ovarian secretion is withdrawn, inasmuch as it is a physiologic process. I believe if all the men had to go through the menopause, with its hot flashes and other annoying nervous disturbances, that about ninety percent of them would be called neurasthenics.

DR. GEORGE W. MCCASKEY (closing): I wish particularly to comment on a few remarks made by my good friend, Dr. Emerson. He says that these hormones, the active principles of these glands, do not control anything. Well, that depends perhaps on his definition of "control". If there is any one fact which has been proven beyond peradventure of a doubt within the last decade, it is, in my opinion, that thyroxin in the tissue cells does control the metabolic processes of the body. They will go up with an increase of thyroxin; they will go down with a diminution. It may be that thyroxin, exactly as we know it, is not produced in the laboratory of the thyroid gland; but the studies of Kendall and the close relationship of the functional activity of the thyroid gland to the metabolism seem to indicate that this hormone with a certain kind of iodine does, in the sense in which I would use the word, absolutely control certain metabolic processes of the body. The nervous system of course controls the hormone output, and it may be that this is what Dr. Emerson has in mind. But the nervous system itself is just as dependent upon thyroxin as any other tissue, and its metabolism is equally controlled by thyroxin.

I do not know that I can agree with Dr. Emerson that we do not know that any of these hormones as such actually exist in the blood. It is true, for instance with reference to epinephrin, that the adrenal gland and all of its constituents have been subjected to violence, they have been destroyed, and these products might easily be synthetic. But how about the fact that there is something in the blood in the lumbo renal vein which can be demonstrated

pharmacologically to produce the same effect as adrenin.

The limitations of our knowledge are great. It has been brought out that destruction of the cortical substance of both glands will produce death. No single chemical body has ever been isolated from the cortical substance that furnishes any explanation of this fact.

Referring to the hypophysis, we have no reason to doubt that it does in a sense control growth. The only substance known to science today which is derived from the anterior lobe is tethelin, the only physiologic product like adrenin from the suprarenals.

In spite of all its drawbacks and the improper state of development in many directions, endocrinology is essential in the diagnosis and treatment of a very large number of cases. Neither the internist nor the surgeon can get along without it.

DR. C. C. BITLER (closing): Endocrinology is a most important subject. The endocrine system is so closely linked with the vegetative nervous system that to have a comprehension of the endocrine system with its effects you must have a clear conception of the vegetative nervous system and its workings.

The internal secretions undoubtedly have a great influence on the individual's personality and his reaction to environment.

DR. W. D. GATCH (closing): I might compress my paper into one sentence: The most important fact in our knowledge of the endocrine organs is the limitations of our knowledge. This should make us conservative and careful about what we do in diagnosing supposed endocrine disease, and especially cautious about performing serious surgical operations on this diagnosis.

In regard to the question which was asked about the normal excess of endocrine tissue, I did make the statement that there is a large margin of safety provided by nature in all the endocrine glands. I think that is established clinically and experimentally in all of the well-recognized endocrine glands. You can excise up to five-sixths of a thyroid gland and the patient will manifest no symptoms of insufficiency. The same thing is true of the adrenals, experimentally. I might point out that the very fact that nature has provided such a large margin of safety in these glands makes it extremely difficult from a diagnostic standpoint to recognize small degrees of hypofunction.

I did not say that thyroid surgery was useless. I practice thyroid surgery and believe in it heartily. I was simply pointing out the necessity for going slowly and for ruling out other possibilities before we resort to thyroid surgery. I selected the thyroid because we know more about it than any other ductless gland. If our knowledge is incomplete there, how much more so must it be with regard to the other glands.

EPIDEMIC JAUNDICE*

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The nomenclature of jaundice, like others we have inherited, is not satisfactory. The naming of a disease after a terminal symptom cannot be considered scientific, while the other terms connected with it are used in such a haphazard manner that it creates confusion. The name infectious jaundice is used by various writers for at least three different conditions: Weil's disease, jaundice when secondary to some other disease, such as pneumonia or some septic infection, and the form described in this paper. But while the terminology as used is unsatisfactory, it would be fully adequate if writers were more exact in its use. The disease to be discussed in this paper will be distinguished as epidemic jaundice as this describes it, and that it may not be confounded with catarrhal jaundice, Weil's disease or secondary infectious jaundice.

Our text books, under the head of catarrhal jaundice, after describing the symptoms and giving the cause as stone, bacteria and chemical, make the brief statement, "It may occur as an epidemic." But an epidemic as extensive as we experienced, which ran as true to type, with as selective a location, must have a specific cause.

An acute infectious jaundice called Weil's disease can be excluded for it differs in occurring in males most frequently, occurring during the summer months, in patients between the ages of twenty-five and forty, is somewhat occupational, as ditch diggers and butchers are more susceptible, and this is probably the form affecting armies. It probably is a more serious disease than epidemic jaundice. It very likely is the form of jaundice in which the Japanese investigators found a spirrillum that they named leptospiro icterohaemorrhagiae. This organism appears in the blood of patients on the second or third day and in the urine on the eighth day. It can readily be cultured by intravenous or intraperitoneal injections of the urine in animals.

The redundancy of this name has apparently impressed the United States Health Service and various writers in this country for they have assumed that the epidemic of jaundice occurring in this country was caused by it. But numerous investigators in several hundred cases examined have failed to find it in a single case. Rats have been found with what is supposed to be an identical organism. While the New York State Board of Health studied epidemic jaundice, one of the laboratory workers accidentally inoculated herself with the rat infection. She ran a course of infection differing in many respects from the epidemic jaundice and

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although the published report stated that "there was no connection between this case and the cases of jaundice being studied", this is overlooked, and the public press published, and many doctors believe, that the cause of epidemic jaundice was definitely established.

Blood and urine from some of my patients was sent to the Rockefeller Institute of Medical Research but proved negative.

For many years an occasional paper has appeared describing epidemics of jaundice occurring at camps and colleges without much attempt at classifying the form. Herriman of New York City, in 1913, described an epidemic appearing at a child clinic with 98 cases, and again in 1917, one with 24 cases, nearly all occurring in children between three and ten years old. He was the first and only one to classify it as a disease of childhood. At that time he was of the opinion that it was a mild form of Weil's disease; "that the infectious material enters the body through the nasopharynx; that it is a primary infection of the liver and not an ascending infection from the duodenum; that there is no evidence of its being conveyed by food or water; that the infection takes place by direct contact; that it is only slightly communicable, for most persons have a natural immunity and that one attack renders a person immune; that it is more common in children because they are more susceptible and have not been immunized by previous attacks; in camps (and the same applies to colleges) because a number of susceptible and non-immune persons are brought in contact."

Within the last two years frequent reports of epidemics of jaundice occurring in many of the northern states have been made, so they have apparently become more frequent or are attracting more attention than formerly. Endemic cases may occur at any time but so far as recorded the epidemics have been confined to the late fall and the early winter months.

Epidemics of jaundice may not be as uncommon as they are unnoted. A number of years ago nearly all of the pupils in a country school in our neighborhood were jaundiced.

For ten weeks following October 1, 1921, Middletown and its immediate vicinity, with a population of about 3,000, equally divided between town and country, had at least 150 people affected with a gastro-hepatic disturbance that terminated in jaundice. This is a greater proportion than heretofore have been affected with any other one infectious disease at one time, including influenza. There were no fatalities, but the total morbidity was great and the loss from school and work considerable. During this time many cases appeared at Bluntsville, twelve miles to the east, and at Markleville, the same distance to the west of Middletown. Other cases appeared at towns bordering this area. This probably marks the extent of territory invaded by the epidemic.

Forty cases were studied and tabulated. This included only the worst cases in which jaundice was well marked. The tabulation does not include cases with all of the other symptoms, or some of them but were not jaundiced, those of the family that have had the same thing but were not seen by me, those waited on by other doctors or others known of but had no doctor, but only cases seen by me personally[1].

These cases had all been in contact, they had all used city water, but this had proved good immediately before and during the epidemic. Food could be eliminated as a cause on account of the wide distribution of the cases.

The first two cases were illustrative of the entire series.

Case 1. Young man, clerk in grocery, suddenly taken sick with vomiting and pain in stomach, tender over liver. Temp. 101. This continued for four days, complained greatly of soreness over body, especially limbs, "as if he had been pounded, and felt like he was drunk". He lay or sat in a listless manner and looked quite sick. On fifth day he spoke of peculiarly colored urine, and on examination found it heavily charged with bile. I prognosed that jaundice would appear. On the seventh day of his sickness he was quite icteric, but was up and around and rapidly grew better. Three weeks after his sickness he reported that he never felt better and weighed more than he ever had.

Case 2. Delicate school girl aged nine years, living just across the street from Case 1. Taken sick in same manner, suddenly vomiting, pain in epigastrium. Vomiting and pains continued for ten days. Temperature reached as high as 103. Epistaxis, vertigo, diarrhea at first. Bile in urine on fourteenth day, but skin and sclera did not show it until the twentieth day. While she was sick I was called to neighboring family to see two brothers in same bed with primary symptoms, and to see three children in one family in the country with the same. And from this it extended.

A case history of each would not be of interest as they ran much the same course and a summary of my forty cases will suffice: Living conditions, both good and bad. Sex, equally divided, twenty males and twenty females. Ages, 3 to 23, one exception was 39. Thirty, or 75 percent, were of school age. Five were under and five were over school age. Previous health, the delicate were more sick and more susceptible—one exception, a fourteen-year-old girl in advanced pulmonary tuberculosis, who

(1) Some of the untabulated cases were of great interest. Four infants in families with jaundice had all of the symptoms but were not icteric. One five-month-old baby, entirely breast fed, had a temperature of 105. One six-pound baby, born of healthy parents, twenty-four hours after birth had vomited, a temperature of 104, and became icteric. This all continued for ten days, when at the request of parents and on advice of consultant, surgeon reluctantly operated and found inflammatory adhesions constricting duodenum about one inch below pylorus.

has since died, ran a mild course. None had acute respiratory symptoms. Four had had their tonsils removed. Prodrome:—This was indefinite as I saw but few cases the first two days. Some had chill but not pronounced, the most of them slight fever from one to three days, one for ten days. Temperature from 100 to 101, the highest 103. If any prodrome before vomiting it must have been short. All complained of malaise and nausea, soreness rather than aching, none complained greatly of headache. One six-year-old boy had an initial convulsion[2]. Dizziness was a very constant and early symptom. One on arising in the morning started for another room to build a fire but had to sit down to avoid falling, later vomited and ran regular course. Diarrhea occurred in only four cases, the others had taken cathartics. Vomiting was an early and constant symptom, but varied from once to several times a day for ten days. The average case vomited for three days. Vomitus showed no peculiarities, only stomach contents and secretion, no excess of mucous or bile. Laboratory examination revealed nothing bacteriologically. One reported blood in vomitus. Pain was synchronous with vomiting and was of varied severity, none required hypodermics of morphia. The location of pain invariably over the epigastrium. Liver but slightly enlarged in few cases, in some it apparently could be outlined more plainly than normally. Icterus occurred on the fifth to twentieth day. Only one on the twentieth day and one on the twelfth day, twenty showed on the seventh day, or in just half of the cases.

Jaundice was of various grades, from light lemon to greenish yellow, always plainest in sclera. Some said it rubbed off on sheets. It lasted from two days to two weeks. Puritis of various degrees generally occurred when icterus began to fade. Bile showed in urine one or two days preceding appearance of icterus of skin or sclera. The average loss of time from school or work was two weeks. Stools very offensive and usually clay colored but sometimes bile continued to show in them.

In seven instances and in 50 percent of the cases more than one member of the family was affected at the same time. If there is an incubation period it must be very short, for there were no successive cases, but the different members were taken sick within a few hours of each other. There was one exception, two were taken sick one week after two others had it.

Recovery was usually prompt after appearance of icterus, but they all had the appearance of having been through a severe sickness. Some reported an unusual appetite after recovering, while others appeared anemic.

(2) I know of one other five-year-old boy who had an initial convulsion.

Treatment: They had all taken physics before I saw them, and I gave very little thereafter for I found it increased the irritation and pain of the diseased parts. Other treatment was symptomatic. Used various intestinal antiseptics; for vomiting, gave chloroform water; for pain, camphorated tincture of opium was satisfactory. Hexemethelanamine or phosphate of soda and murate of ammonia have been suggested as satisfactory treatment. Many of them were given ferruginous tonics during convalescence.

These cases intrigue one to speculate on the future of these patients—will this acute disease leave a permanent nidus for chronic disease of the gall ducts and bladder and the duodenal tract? That it could cause very serious sequela was very decisively shown in two cases. One nine-year-old girl, three weeks after onset of the disease and one after apparent recovery, after definite exposure, developed an acute diffuse nephritis, fever, severe headache, edema of hands, feet and face, 1 percent of albumen in urine. The other girl of eleven, five weeks after onset and two weeks after apparent recovery had severe chill, temperature 104. short, painful respirations, lying on right side with thigh flexed on abdomen, right shoulder drawn down, painful to move or change position, tender over slightly enlarged liver, slight, painful cough with light rales in lower right lung. She recovered after seven weeks' severe illness.

A study of these cases, considering its intense malaise, seasonal and age incidence, its selective action, and the minor importance of the fever, has led me to the conclusion that the cause of the epidemic is the same as the cause of the epidemic of influenza in one of its protean forms, or another of as mysterious and subtle character. That it should be a spirrillum necessitates the presence of an intermediary agent. The disease occurring during the season when there are no flies, mosquitoes or fleas and in a sanitary district where malaria, typhoid and diphtheria are unknown does not seem reasonable.

Conclusion: Epidemic jaundice is an entity, and distinct from catarrhal or infectious jaundice. The cause is unknown, but probably belongs to the same class or is related to influenza and lethargic encephalitis. It is essentially a disease of youth. Active catharsis is not indicated in its treatment. It is capable of grave sequela.

DISCUSSION

DR. W. M. STOUT (Newcastle): After listening to this very interesting and excellent paper I cannot help feeling that we are more closely acquainted with this disease which he has termed "epidemic jaundice". The thought has occurred to me that this should be made a reportable disease and one which we can quarantine. First, it would impress the medical profession with the disease of epidemic jaundice.

Second, by quarantining these cases we would be able to reduce both the morbidity and mortality, and third, we would have statistics from which to work, if the doctors would do the work conscientiously.

Living within a radius of twenty miles from Middletown, where this epidemic occurred, it was my good fortune to observe four cases. The first case was that of a girl of four years and was similar to those Dr. Waters described. I did not make the diagnosis of jaundice until I found that the child had been spending two days in Middletown. Two other cases, a girl of three and a boy of six, ran the typical course. A cousin of these children who was brought in while they were running the septic course developed a similar condition. This impressed upon me the infectious nature of the disease. The parents did not develop the condition, although they were comparatively young. One thing that was marked in these cases was a tenderness over the liver and the possible enlargement of the liver.

The route of the infection comes up for discussion. It is possible that it occurred through the nasopharynx, or that it began secondarily in the stomach and ascended to the liver through the lymphatic and blood streams. One observer has even reported that it might resemble paratyphoid B.

We will have to concede that there are four main types of jaundice: First, acute catarrhal jaundice; second, that due to gall stones; third, that due to cholecystitis, and fourth, that due to malignancy. The epidemic type resembles the first more closely, and it is yet to be seen whether there is a resulting cirrhosis.

These epidemics have frequently been encountered in schools and colleges far distant from research centers, and for that reason the pathology is in a more or less uncertain state at present.

DR. WILL SHIMER (Indianapolis): I think this paper should give everyone considerable encouragement, because Dr. Waters has described the symptoms, the course, the probable etiology and the method of transmission as well as it could be described by anyone. He has not had much laboratory or other assistance, but has worked it out himself.

Dr. Wadsworth, of the New York State Board of Health at Albany, had a good opportunity to study these cases. He started out with the idea that it was due to the leptospiro-icterohemorrhagica and investigated the possible presence of this organism in the blood and other parts of the body, but was unable to find it. Dr. Noguchi, who had the first chance in America to describe the leptospira, was unable to find them in these cases.

One of the other causes of jaundice is B. paratyphoid. Wadsworth cultured the blood and the urine, but was unable to find any bacillus paratyphoid, so the New York State Board of Health did not succeed in finding the cause of their cases. They did find out that the disease was easily transmissible from one person to another. Cases were treated in Albany hospitals and nurses taking care of the children were easily infected with the disease, the incubation period being seven days. It is not only transmissible among children but among adults, and the cases run the typical course in adults as in children.

With reference to the possible mode of transmission, assuming that hospital nurses would take the proper precaution with reference to being infected with urine and feces, we are left to the respiratory tract.

As to the nature of the organism, I do not believe that epidemic jaundice is caused by the same organism that is responsible for influenza. Neither is it generally recognized that lethargic encephalitis is caused by the same organism. It may be that epidemic jaundice lowers the resistance, but these patients always had a leukocytosis of eight to ten thousand, which is the reverse of influenza. The whole thing is up in the air, but Dr. Waters has described an epidemic which is the first of the kind to be described by physicians in Indiana, he has done it with limited facilities, and has given data which will compare favorably with data collected by trained experts. It is evident that there are many epidemics of jaundice, and not only are the doctors of Indiana overlooking it, but the doctors of Ohio, where no such epidemics have been recorded. Since it is common in New York and Pennsylvania, I assume that it is common in the adjoining states but has not been reported.

Dr. Waters deserves considerable commendation for the way in which he has described it. His conclusions in reference to the disease are worthy of consideration.

DR. W. A. FANKBONER (Marion): It has been a question in my mind whether this disease is not a post-war condition, as is the epidemic type of encephalitis. It is very evident in the study of this type of encephalitis that it is a post-war condition. It followed in Europe the lines of transportation and spread very largely along lines of transportation, and after the world war was widely epidemic. It seems just as reasonable to suppose that this travel factor may be operative in the spread of epidemic jaundice. The most practical working hypothesis is that it is an air-borne disease, the invisible vapor that is coughed out or sneezed out carrying the infection, keeping in mind also the matter of direct contact. It is pretty well determined that epidemic encephalitis is so transmitted, although it gives no evidence of the high degree of sensitivity that Dr. Waters has shown us in epidemic jaundice. It is just as

reasonable to decide that an infection of the upper air passages can localize itself about the bile apparatus as it is to accept the well-established fact of other selective localization of infections.

DR. W. W. WADSWORTH (Muncie): Dr. Waters' paper is a valuable study and shows close observation, analysis and classification of the varied phenomena through which these cases passed from onset to resolution. He has given us a fine example of student quality in his report on epidemic jaundice.

Just a word as to the communicability of this infection. It has been contended that epidemic jaundice, like epidemic encephalitis, is of unproven origin and indefinite contagion. However, it has been assumed that its transference is through association or individual contact. It may therefore be assumed that in a small community the victims of the epidemic were more or less closely associated. Did not the children attend the same schools, Sunday-schools and churches? Is it not reasonable that this infection, like that of kindred epidemics, is through respiratory contact?

DR. CHARLES A. SELLERS (Hartford City): From an etiological standpoint, I believe we were all in agreement that anterior poliomyelitis did follow our lines of greatest travel. I believe acute epidemic jaundice will do the same thing. In the year 1915 we had an epidemic of jaundice that limited itself to the school children. At that time we had opened up a new swimming pool in our high school. The English had to close their bathing pools during the Boer War because of epidemic jaundice.

DR. S. C. WATERS (closing): The Epileptic Village that lies within the affected area had fifty cases of jaundice during the epidemic. Only inmates were attacked. These use tin cups for drinking purposes. The attendants, who use glasses, escaped. You can draw your own conclusions.

All the epidemics I have heard or read of have occurred during the months of October, November, December and January, so this is the time of year to be on the lookout for it.

PRESUMPTIVE TEST FOR THE ETIOLOGIC FACTOR IN BACTERIAL FOOD POISONING

Victor Burke and Charles W. May, Puliman, Wash. (*Journal A. M. A.*, Nov. 11, 1922), have devised a rapid test for the etiologic factor in bacterial food poisoning, of such a practical nature as to be readily applied by the practicing physician lacking access to a diagnostic laboratory. The test consists of a rapid, confirmed test for the toxin of *Clostridium botulinum* (*B. botulinus*) combined with a slower presumptive test for organisms of the paratyphoid-enteritidis group. There is also described a rapid presumptive test for the presence of botulinus toxin which may be used when botulinus antitoxin is not available. The application of this test in a recent outbreak of botulism, with the resulting diagnosis and case history, is included. In testing to determine the presence and nature of the poisonous substance in a jar of canned asparagus, 2 c.c. of the unfiltered asparagus liquor was placed in each of five serum tubes. To the asparagus juice in the second tube was added 1 c.c. of Type A botulinus antitoxin. To the third tube was added 1 c.c. of Type B botulinus antitoxin. The fourth tube was placed in boiling water for ten minutes. To the fifth tube was added 0.5 c.c. of a 10 percent solution of hydrochloric acid, which was allowed to stand ten minutes. The contents of all five tubes were then neutralized to litmus with a saturated solution of sodium bicarbonate. The contents of each tube were then injected into the marginal ear vein of a medium sized rabbit. The results obtained indicate that the asparagus contained a botulinus Type A toxin.

LEUKOPLAKIA BUCCALIS

H. H. Hazen and F. J. Eichenlaub, Washington, D. C. (*Journal A. M. A.*, Oct. 28, 1922), report ten cases which illustrate that syphilis represents an accidental rather than a causative factor in this disease. The use of tobacco is not necessarily a factor. Rough teeth, by causing mechanical irritation, inaugurate the disease in the vast majority of cases. Etiologically, leukoplakia is analogous to keratosis of the skin, in that the former is a defense reaction against mechanical irritation in the mouth, the latter a defense reaction against the actinic rays or mechanical irritation, or both, on the skin. Each develops as a result of functional overactivity. These cases are extremely rebellious. They tend to remain stationary or gradually to progress over a period of months or years. They are distinctly precancerous. Antisyphilitic treatment is of no avail, and need not be considered in the treatment. Some of the earlier cases will clear up if the source of irritation is removed. As tobacco is undoubtedly a very important factor, its use should be interdicted. If the cases are very extensive and severe, no treatment is likely to avail, even radium being useless. In the authors' hands, the best agent has been the cautery. This is used at red heat, with local anesthetic. With a little experience one can learn to burn deep enough to destroy all leukoplakia, and yet leave a functioning membrane.

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Devoted to the Interests of the Medical Profession of Indiana
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EDITORIALS

OUR HOLIDAY MESSAGE

THIS December number of THE JOURNAL comes at the close of another year. To many it has been a year attended with accomplishments that mean satisfaction with individual effort, while to others it means the closing of a year that has been attended with failure to attain the results desired. However, with the beginning of the new year we have a right to look forward with optimism concerning what is in store for us in the future providing we begin the year with a determination to win in all of our legitimate undertakings, and it is but a laudable ambition to desire to forge ahead in the struggles that fall to the lot of everyone who has success as his goal. During the last few years the whole world has been in a restless, unsettled condition, and this has been felt in the United States as well as in Europe. There seems to be an undercurrent of opposition or antagonism to the established order of things. This feeling is felt in politics, religion, business affairs, and even in the practice of medicine. The public seems to be bent upon chasing rainbows in efforts to secure relief from disease conditions, and in consequence the educated and well trained doctor sees many of his best patients, for no reasonable or logical cause, seeking relief at the hands of various brands of rubbers or kneaders and wily faith healers of one kind or another. A little sober thought and analytical reasoning on our part will show us that right always prevails in the end, and since the days of Hypocrates there have been many forms of quackery and many kinds of pseudo-medical cults that have sprung up, thrived for a time and then died, whereas the regular practice of medicine has continued to live and every day grow in importance because of the progress that has been made and the great work that has been done for suffering humanity. There is, however, a time for introspection, and with the closing of this year and the dawn of a time when, through custom, good resolutions are made, why wouldn't it be a good idea for us to study our failures, and in particular any failure on our part in taking the public into our confidence in the dissemination of knowledge as to our aims, objects and accomplishments? If we have failed to do our part in protecting the public from the delusive teachings and practices of the quacks and pseudo medical cults, and there is every evidence to show that we have failed in that respect, is it not a duty that we owe to ourselves as well as to the public to start a new order of things with the coming year to the end that truth will prevail? This will be realized at an earlier date than it will be if we are apathetic. Just as there is need for great reconstruction work in politics and business, so is there need for reconstruction work in our profession, to the end that the greatest good for the greatest number may be secured. We need a closer affiliation of medical men, a greater respect for the opinions of each other, and above everything else, a good deal more activity for the good of the many rather than for the individual himself. We need solidarity, and a unity of purpose in our medical organization, with every member working for the common good. We do not need any new ethics, but a strict adherence to the ethics that supposedly have governed medical men for a century. We need to cultivate to a greater extent a feeling of brotherly love, and we need also to adopt more rigid rules pertaining to the question of honesty and integrity in these times when commercial trickery and chicanery are so prevalent as a means of financial gain. In wishing the readers of THE JOURNAL a Merry Christmas and a Happy New Year, we also wish to express the hope that throughout the coming year the medical men will see as they have never seen before the necessity of joining hands in one solid phalanx in the fight for everything that is progressive, honorable and just in the practice of medicine. If we do this we not only shall accomplish great things for the public as well as for ourselves, but we will have the satisfaction of accomplishments that will merit the respect and approval of everyone and give the utmost satisfaction to each of us as individual physicians.

EXAGGERATED CLAIMS FOR MEDICINAL PREPARATIONS

Doctors should be on their guard when accepting the claims of manufacturers concerning the curative or therapeutic effects of certain remedies that are offered for use of medical men, generally with very exaggerated claims as to virtue. It is perfectly natural that the manufacturers should attempt by every conceivable way to increase the sales of their products, and even though the literature that is sent out sometimes is temperate in statement, the traveling representatives often are quite the opposite and go to extremes in claiming all sorts of unpossessed virtues for the particular products that

they are introducing to the medical profession. Because these representations of both manufacturers and their representatives are so unreliable, no doctor is justified in putting faith in anything that is offered to him without learning something about the trustworthiness of the recommendations that have been made. This is where the Council on Pharmacy and Chemistry of the A. M. A. comes in and offers a service to the medical profession that is deserving of the greatest confidence. In fact, it is the only clearing house through which the medical profession is able to determine in an unbiased as well as perfectly trustworthy manner the virtues of all preparations that are offered to the medical profession for use in treating diseased or abnormal conditions of the human system. Unfortunately there are some doctors who seem to think that they do not need the advice and counsel of such a representative body of men as those composing the Council on Pharmacy and Chemistry, and it is because of this fact that manufacturers of untrustworthy pharmaceutical products are able to thrive and profit. One of the first questions asked concerning a new product should be whether it has been approved by the Council, and if so how far does the approval go in sustaining the assertions of the manufacturers. Oftentimes the first claims for a new product are sustained, but immediately upon having the product approved the manufacturers or their representatives begin to add to the claims to the extent that unpossessed virtues are given the product and in consequence the users are misled and imposed upon. There also is another phase of the question which has to do with extravagance of even legitimate claims concerning virtue. As a concrete example of this, we cite the case of mercurosol, broad claims for which in the treatment of syphilis have been made by the manufacturers. The claim has been put forth that mercurosol is a superior mercurial preparation and not only preferred, but more efficient than other mercurial preparations in the treatment of syphilis. In reality it seems to have been proven (Cole, Driver and Hutton in the *Journal of the A. M. A.*, November 25, 1922) that the results are not better than secured with the old and tried mercurials. In fact it has been shown that in a considerable percentage of instances the patients became worse following treatment with the drug, and some showed no improvement. It also comes very far from having the high spirocheticidal value which the printed data of its manufacturers claim. The effect on the Wassermann reaction over a short period of time was practically nil. The drug when given intramuscularly seemed to be moderately well tolerated, but not any better than red iodide of mercury. Intravenously, however, in four of twenty-three patients, a sclerosis of the vein developed—this in spite of the claims that there is no deleterous action of the drug on the vein walls. In fact, the report seems to discredit most of the claims put forth by the manufacturers, and only goes to show that doctors should be skeptical about accepting the recommendations of the manufacturers of any remedy, and to rely more upon the opinion and recommendations of such an experienced and trustworthy body as the Council on Pharmacy and Chemistry.

POOR CALIFORNIA

The chiropractors of California, through an adroitly worded bill and a clever and misleading propaganda, appealed for an independent chiropractic licensing board to the sympathy and a lack of understanding on the part of the voters of the state, and at the election of November 7, under the initiative, they won. They carried along with them the struggling osteopaths, who were given an independent licensing board of their own. Now the people of California can have their back bones chiropractically analyzed and adjusted, and their inflamed appendixes osteopathically rubbed to the point of rupture, by any person whom the State Board of Chiropractic Examiners or the Board of Osteopathic Examiners of the state of California, as the case may be, sees fit under the law to set loose on the suffering community. The Board of Medical Examiners of the state of California is relieved from all duty and responsibility in the premises. The only evidence of state sanity from the medical standpoint in the California situation, as far as was disclosed by the recent election, was the defeat of the measure which aimed to prevent the use of living animals for research designed to advance medical science and the welfare of men and dumb animals.

What chiropractic is, the California law does not say. One licensed by the board of chiropractic examiners is authorized "to practice chiropractic in the state of California as taught in chiropractic schools or colleges; and, also to use all necessary mechanical, and hygienic and sanitary measures incident to the care of the body;" but his license does not authorize "the practice of medicine, surgery, osteopathy, dentistry or optometry, nor the use of any drug or medicine now or hereafter included in the materia medica." The law creating the board of osteopathic examiners omits altogether any definition of osteopathy, but provides that the board shall in respect to all matters relating to graduates of osteopathic schools, applying for or holding any form of certificate or license, take over, exercise and perform all the functions

and duties imposed on and heretofore exercised or performed by the board of medical examiners.

What a chiropractor and an osteopath may do under licenses issued by these new boards will doubtless be determined in the courts, if interested prosecuting officers can be found who will bring prosecutions in cases of apparent violation of the law. It is said that the chiropractors will be entitled to sign birth and death certificates, be health officers, and fill any official position connected with the practice of medicine and public health.—*J. A. M. A.*, Nov. 18, 1922.

EDITORIAL NOTES

DEAR DOCTOR:
THE JOURNAL and the Cooperative Medical Advertising Bureau of Chicago maintain a Service Department to answer inquiries from you about pharmaceuticals, surgical instruments and other manufactured products, such as soaps, clothing, automobiles, etc., which you may need in your home, office, sanitarium or hospital.
We invite and urge you to use this Service.
It is absolutely FREE to you.
The Cooperative Bureau is equipped with catalogues and price lists of manufacturers, and can supply you information by return mail.
Perhaps you want a certain kind of instrument which is not advertised in THE JOURNAL, and do not know where to secure it; or do not know where to obtain some automobile supplies you need. This Service Bureau will give you the information.
Whenever possible, the goods will be advertised in our pages: but if they are not, we urge you to ask THE JOURNAL about them, or write direct to the Cooperative Medical Advertising Bureau, 535 N. Dearborn St., Chicago, Illinois.
We want THE JOURNAL to serve YOU.

THE season's greetings to all!

PAY your medical society dues now while the matter is fresh in your mind.

WE learn that there are a few misguided members of the medical profession, probably bent upon making money no matter how they make it, who are disciples of one Dr. Abrams, of San Francisco, who has been in the limelight for the last few years as an exponent of a form of pseudo-medicine that is the rankest kind of fakery. To such we recommend the series of articles concerning the preposterous claims of Abrams that have appeared in the *Journal of the A. M. A.* under various dates and copy of which may be obtained by writing the Propaganda Department of the Association.

WITH the beginning of the New Year we hope that the various committees of the Indiana State Medical Association will begin to functionate if they have not done so already. We know that the legislative committee has been busy for some weeks, but what about the other committees? Of especial interest to the medical men of Indiana are the results that should be accomplished by the committee in Industrial and Civic Relations. We hope that that committee will not be a committee in name only, but that it will do some real constructive work in the economic interests of the individual members of the association.

KNOWING Dr. Hurty as we do, we expect great things of him in educating the public concerning the aims and objects of scientific medicine. If he can impress the public through the newspapers and by word of mouth as he addresses lay audiences, as to what modern scientific medicine is and that the people need doctors as expert advisors just as they need electricians, engineers, architects and other technically trained men, and that fakirs and cults are dangerous because they are ignorant, he will accomplish much in the interest of better health and create a higher appreciation of the services of well trained medical men.

THE chiropractors are using full page illustrated advertisements to attract patients, but then that is no worse than what is done by certain supposedly ethical members of the regular medical profession who take up full pages in the photogravure sections of lay publications, or several pages in popular magazines. The chiropractors also are making use of some wonderful signs illuminated by varicolored electric lights, and in some places occupying almost the entire front of a building. Surely the members of the regular medical profession who are bent upon placing themselves before the public by means of advertising are not going to let the chiropractors get the best of them. Why not get up a contest and give a prize for the ones who can create the most attractive and best pulling advertising?

ON the first of the year the Indiana legislature will convene. We hope that the Indiana medical practice act may be strengthened to such an extent that law breakers, so far as pertaining to the practice of medicine, may be punished in a suitable manner. There will be those who will try to nullify the effect of the existing medical laws, and the pseudo-medical cults will try to secure legislation favorable to them which would in effect place the people in Indiana in a position whereby they will have no protection from incompetents. The legislative committee of our association has a great work to do in connection with these various legislative problems and we sincerely hope that every member of the Indiana State Medical Association will give this committee active support and this means not only moral support, but assistance in the way of time and money if called upon for such in order to work most effectively.

THE opticians of the country sponsored a "Better Vision Week" and gave the public, through newspapers and lectures before various societies, their ideas concerning the need of glasses. We have been rather amused to see the chiropractors take advantage of the situation by advertising boldly that chiropractic treatment will in many instances enable persons to do without glasses. Even Cancer Week was utilized by some chiropractors in advertising to the effect that chiropractic treatment tends to place the patient in a position to resist the ravages of cancer. The merits of advertising have been proved time and again, and no doubt there are plenty of gullible people who will believe what they see in advertisements, but we have been wondering why the various better business bureaus, and the national and local advertising clubs that have been having as their slogan "honesty in advertising," have not seen fit to place the stamp of disapproval upon misleading and delusive advertising of the pseudo-medical cults.

THE Religious Liberty Association of Indiana, Illinois, Wisconsin and Michigan, asks us to oppose the movement for Sunday law enforcement which it is thought would menace the freedom of the press. It is reported that the protestant churches are to go into politics for the purpose of and with the particular demand for the enforcement of a Sunday rest law, and that a state wide campaign is to be instituted in the State of Indiana.

We do not think that any great amount of force will be put into the contemplated move and for the reason that some of the most devoted members of the protestant churches would oppose such action. Not only is sectarian influence in State and municipal affairs objectionable, but our religious liberty is not to be tampered with. We do not believe any considerable number of people will sanction any attempt to regulate or influence the observation of religious duties or in any way interfere with what belongs to the conscience of each individual.

MANY doctors are members of churches and various organizations supported or sponsored by churches, and such doctors have a right to protest against the attitude of the various religious organizations that through their officers are upholding and actually working for some of the pseudo-medical cults. Some of the leaders in the Y. M. C. A. and Y. W. C. A. activities actually are "tooting" for chiropractors who at the present time are law breakers, to say nothing of being incompetents, yet these same ring leaders in Y. M. C. A. and Y. W. C. A. work are soliciting endorsement and financial support from reputable members of the medical profession. We have no objection to the preferences shown by ministers, Y. M. C. A. or Y. W. C. A. secretaries, for legalized and reputable practitioners of medicine, but we do think that it is time for withdrawal of support of those religious workers when they not only uphold quackery, but actually work for quackery's advancement. If the church and various religious associations as organizations or through their officers are going to support the pseudo-medical cults and quackery, then it is time for the regular medical profession to withdraw its support from such organizations.

FEE splitting is a great game. As long as there are doctors who possess elastic or perhaps we ought to say no consciences, and the public does not interest itself in being stung, just so long will the iniquitous practice of fee dividing thrive. However, it is a little amusing to a rank outsider to note the howls of protest which go up from the old time fee dividers when they note that their "business" is slipping from them because rivals, usually younger and often without adequate training or experience, are getting the "business" because a larger commission is offered. Of course, the poor patients' best interests are not considered. In fact, the submissive patient with a mistaken notion concerning the solicitude of his family physician is led blindfolded and hobbled to the highest bidder, where he is made the object of the most mercenary transaction that it is possible to conceive. It is reported that one man has said: "I am going to get mine while the getting is good," but while all this is going on the medical profession as a whole is getting a black eye which it very justly merits. The innocent may suffer with the guilty, but at least they have the satisfaction of having a clear conscience, and we can not help but feel that even the grafters in the medical profession, in their own hearts, have very high respect for the men in the profession who are trying to be clean and honest.

PALMER, the high priest of chiropractic, is broadcasting by radio a talk on salesmanship as applied to chiropractic. It is a little amusing to hear him announce to chiropractors that their work is a business, and that it must be "sold" to the public by making everyone think that they can be benefited by chiropractic adjustments. On the other hand the public is told that the only way to get well is to seek chiropractic treatment, and the inference is drawn that every person can be made a little better by certain adjustments that only the chiropractor can give. Very naturally a lot

of people are going to take up with this "gold brick" proposition, and many will pay the penalty for being deluded by such specious argument, but the point of this incident is that the growth of the pseudo-medical cults and their popularity with the public is due entirely to such propaganda as is being spread broadcast by Palmer. What is the regular medical profession doing to offset this pernicous propaganda? It is quite true that the New York State Board of Health is doing a splendid work in giving daily and weekly health talks by radio, but there should be more such activity in every state in the union. In fact, the regular medical profession has a great educational work before it if the public is to be prevented from accepting such delusive information as is being put out through the propaganda of chiropractors and other pseudo medical cults.

THERE is something radically wrong in this country when the Standard Oil Company can declare a dividend of a hundred per cent and many other companies can declare dividends equal to or almost as large. Every corporation is entitled to a fair return upon money invested, and the return should provide for a reasonable surplus, but there is no excuse for such enormous profits. While we are thinking of profiteering and the evils resulting from trusts and combinations of capital let us not forget that some of the labor unions are limiting the number of apprentices in certain trades, and even in some instances barring the taking on of apprentices for periods of years, all with the idea of controlling the labor situation and forcing higher prices. Evidence has been produced to show that in New York City as well as in Chicago, plasterers have demanded and received wages and bonuses that netted the individual plasterer twenty-five to thirty dollars per day, with short hours for the day and no great amount of work accomplished during the day. It looks as though "all are doing it," though we haven't heard of any move on the part of the medical men to control the market for medical and surgical services, nor boosting the rates to a profiteering basis, and, worse than all, our government that we are called upon to bleed and die for if necessary, soaks the poor man, including the hard-working doctor whose earnings represent his individual effort, whereas big business and individuals having unearned income manage to escape to a very large extent. We do not believe in bolshevism, communism, or socialism, but we do believe that something should be done to equalize the burdens in this country.

TALK about Barnum humbugging the people and short change artists taking advantage of all who come their way, the chiropractors have both beaten a mile. The strange part of it is that supposedly reasonably intelligent people "fall" for such a humbug. Recently a young woman who had never worn glasses and needed appropriate lenses to correct a large error of refraction which was causing terrific headaches when the eyes were used for the close point, admitted that she had been treated by a chiropractor for several months in the belief that pain in the eyes was due to an impingement of nerves in the spinal column. A pair of glasses relieved her trouble, but the chiropractor capitalized his ignorance or knavery, or both, to the extent of over a hundred dollars, and the credulous patient pays the penalty. If these chiropractors had any knowledge of the fundamental branches of the science that deals with the human body in both health and disease, they would not be chiropractors. However, they do not have the time, ability or money to obtain such knowledge and they follow the alluring promises of the chiropractic leaders who frankly state that nothing more than a common school education and a few weeks training is necessary in order to become a chiropractor and that easy money awaits the one who begins chiropractic. The chiropractic leaders realize the force of Barnum's reputed statement that the public likes to be humbugged. The public certainly is humbugged when it takes up with chiropractic, for, generally speaking, there never was a more monumental fraud perpetrated upon the impressionable public, and the pity of it is that it is practiced upon the sick and suffering who deserve the best that can be obtained and, in their ignorance, should be protected by law.

THE Indiana legislature will be in session again next month. We shall be interested in knowing how many Indiana doctors are sufficiently interested in their own welfare to give any time or the slightest attention to the matter of legislation that will affect them. We venture to say that the chiropractors, the Christian Scientists, and the members of various other pseudo-medical cults have gone to considerable trouble to acquaint themselves with the attitude of the incoming legislators concerning subjects which directly or indirectly affect the practice of medicine or public health affairs. How many members of the Indiana State Medical Association have turned a hand in this direction? The time to do most of the work is before the legislature convenes and not wait until threatened legislation is about to pass the legislature and then leave it to a few men to frantically work to stem the

tide of adverse action. Why not get your coat off, Mr. Lazy Doctor, and do something? You are the fellow who will whine the loudest when the legislature passes something that interferes with your vocation and be detrimental to the welfare of the public as well. Pure selfishness and a desire to improve your economic and social position ought to impel you to get busy, even if you haven't the spirit in your heart to work for what you know to be right and just for your fellow men. Quackery of every description is harmful as well as dishonest, and there should be some means of curbing or suppressing it. You recognize this fact and yet you inwardly nurse the feeling that if you do not stir yourself someone else will, and thus the work that is of benefit to you will be done by someone else. That is the wrong attitude. Don't adopt the slogan, "Let George do it," but get busy yourself.

THERE is ample evidence to show that the Christian Scientists are hooked up with the pseudo-medical cults, the American League for Medical Freedom, the Anti-Vaccinationists, the Anti-Vivisectionists, and all the other sects and organizations that are fighting scientific medicine. The Christian Scientists and the chiropractors put up a strenuous fight to defeat Dr. J. N. Hurty from being elected to the Indiana legislature but they were unable to accomplish the desired result. These two cults, partners in efforts to retard progressive medicine, sent out circulars to the faithful, and to others thought to be susceptible, asking that Dr. Hurty be "swatted" at the polls. Verily, politics make queer bedfellows. However, organized medicine has received so many hard jolts as a result of just such work as done by the combination of chiropractors and the Christian Scientists that it is time for medical men to wake up to the realization that no matter how virtuous and just our cause, it requires political activity like that put forth by the chiropractors and the Christian Scientists to gain anything, and while Dr. Hurty won out, largely through his personal popularity, yet we have no reason to lie down on the job and conclude that we always are going to be so fortunate. Our advice to every doctor in Indiana is to get into politics, no matter whether such action is liked or not. By this we do not mean the rotten politics which some of our adversaries stoop to, nor do we mean partisian politics. We do mean the kind of politics which carries influence and education to the voters as well as to the candidates for office. If the medical men of Indiana would unite solidly in putting forth its influence for better legislation concerning medical and public health matters, there is nothing within reason that they could not secure.

"How to Increase Your Practice and Your Income" is the slogan adopted by some manufacturers of physician's equipment, especially those making devices for the use of electricity or mechano-therapy in the treatment of patients. Evidently some manufacturers are not only tinctured with the idea that for the most part doctors are gullible, but that they are also dishonest, for when soliciting the business of physicians the special plea is made that "few patients coming to the doctor's office are not benefited by daily treatments with electricity or some form of mechano-therapy, and think what that means at one to three dollars per treatment!" Could anything be more alluring? The doctor who "falls" for such "rot" certainly has an elastic conscience if he is not plainly dishonest from head to foot. In reality the doctors who take up with such a proposition deserve no more confidence than the chiropractors who use mechano-therapy for everything and usually stick to it until all the patient's money is gone or the patient becomes satisfied that no benefit is being secured. It is quite possible that many people will be willing to be humbugged by such chicanery, as is evidenced by the fact that a well-to-do family permitted a chiropractor to knead and pommel a child for nearly a year to cure the youngster of the effects of obstructed breathing from enlarged tonsils and an enormous bunch of adenoid tissue in the nasopharynx, and at the end of a year, and after an expenditure of several hundred dollars, the fond parents were told that "all you have to do is to continue the treatment for about six months longer and your child will be cured." What intelligent and conscientious doctor will take up with practices allied to those of the chiropractor and do it because he can increase his practice and his income?

ARTHUR BRISBANE, a well known writer, contributes a feature article every day to a syndicate of newspapers. These articles touch upon every conceivable topic and for the most part are very interesting and the comments pertinent. He has made a justifiable plea for people of all classes to consult a reputable physician when they are sick, and he takes a rap at the anti-vivisectionists and anti-vaccinationists by declaring that to animal experimentation we owe much of our definite knowledge concerning anatomy, physiology and the nature and cause of many diseases, and that we will have smallpox with all of its disastrous results as long as people fail to take advantage of vaccination as a preventive measure. He also has taken occasion to comment upon wonderful specific effects of antitoxin in the treatment of diphtheria, and to remind the public that as a

result of typhoid vaccination, typhoid was practically unknown in the last great war whereas in all previous wars it was one of the greatest scourges contended with. Recently he has mentioned the effect of a new remedy made from the pancreas of a pig which is reputed to be a cure for diabetes. He even goes so far as to recommend that if those who are suffering from diabetes can not obtain from their physicians the desired information concerning this new treatment, that application should be made to the superintendent of the New York hospital in New York city. While some may say that Mr. Brisbane is overenthusiastic in some of his opinions and contentions, yet the fact remains that he does appreciate the fact that all information and all recommendations should come from trustworthy sources and in this respect he recognizes that the reputable, educated and well trained scientists are the ones in whom to place dependence. Undoubtedly Mr. Brisbane, as a noted and popular writer, is doing much to educate the public concerning health problems, and we are very much pleased to note that up to this time he seems to have discussed these subjects in a consistent and rational way.

WHEN we analyze some of the uplift schemes and study the motive which prompts the chief uplifters to interest themselves in such schemes, we usually find that back of the whole enterprise is a personal ambition to be served, or some object which is entirely foreign to the altruistic spirit which the uplifters try to make out as the cause of the activity. This is evidenced by the large number of national societies that have the same or similar objects as a reason for their existence, all more or less at loggerheads, each and every one dominated by a few individuals aspiring for leadership and prominence, and very naturally each overlapping the work of some others. Even the get-rich-quick schemes are of minor importance as compared to various schemes for curing disease or promoting health. The trouble with most charitable and philanthropic organizations is that they do not distinguish between philanthropy and the practice of confiscation of professional service, and in nearly all of these uplift schemes which have to do with health or disease is the medical man who is called upon to donate his knowledge and services. These uplifters who apparently are so solicitous for the welfare of the human race seem to forget that a doctor's professional knowledge and service are just as much his stock in trade as the grocer's foodstuffs or the dry goods man's fabrics. People suffer from preventable diseases every day, of course, and those diseases ought to be prevented. People also suffer from lack of food and from lack of clothing, and those conditions ought to be relieved, but the most rabid philanthropist who does not hesitate to take a doctor's services without any compensation at all would never dream of going into a grocery store or dry goods store and helping himself or herself on the plea that people were hungry or naked. As one of our medical friends tersely puts it, "The doctor very foolishly has permitted himself to be put in a position where he is giving away the most valuable part of his knowledge and services, and he is trying to make a living on the rest which is constantly diminishing." Naturally he is beginning to feel the pressure and to squeal. Sometimes his resentment takes the form of objection to public health plans. This is unwise, because public health work in its true sense is going to go on and we can't stop it. What he should object to is the constant effort to promote public health plans at the expense of the profession and to insist that whenever professional services are furnished that they shall be paid for at a reasonable rate. The fact that this is service rendered to the public does not in any way justify the exploitation of the medical profession. Lawyers, of course, learned this centuries ago, and every legal service that a lawyer renders to the people, either as an individual or as an official, is well paid. Doctors had no services which they could render the people until present day public health knowledge developed, and they weren't wise enough on the start to insist upon proper compensation. There are two principles that should be adopted as slogans of the A. M. A. and every medical society in the country. The first is: "All medical work shall be done by medical men" and the second, "All medical work shall be adequately compensated."

DEATHS

WILLIAM Y. WELLS, M. D., died November 10, at his home in Laketon. He graduated from the Indiana Medical College, Indianapolis, in 1873.

T. B. RITTER, M. D., of Orleans, died October 27, aged 71 years. He was a member of the Orange County Medical Society and the Indiana State Medical Association.

WILLIAM H. BUTLER, M. D., died in Richmond, November 17. Dr. Butler graduated from the Medical College of Indiana, Indianapolis, in 1879, and was a member of the Bartholomew County Medical Society and the Indiana State Medical Association.

FRANK C. HESS, M. D., of Cadiz, died November 11, aged sixty-six years. Dr. Hess graduated from the Medical College of Ohio, Cincinnati, in 1881. He held membership in both the Henry County Medical Society and the Indiana State Medical Association.

JOSEPH L. PRESTON, M. D., of Cloverdale, died October 24, at the age of 71 years. He graduated from the Indiana Medical College, Indianapolis, in 1877. Dr. Preston was a member of the Putnam County Medical Society and the Indiana State Medical Association.

ALBERT MAY, M. D., of Crothersville, died November 10, at the age of seventy-six years. Dr. May graduated from the University of Louisville, Medical Department, in 1875. He was a member of the Jackson County Medical Society, and the Indiana State Medical Association.

JOHN N. RECORDS, M. D., died at his home at Franklin, Indiana, November 14, at the age of sixty years. Dr. Records graduated from the University of Louisville, Medical Department, in 1894, and was a member of the Johnson County Medical Society and the Indiana State Medical Association.

ROBERT E. MARSHALL, M. D., of Elwood, died at an Indianapolis hospital, November 5, following an operation, at the age of forty-seven years. Dr. Marshall graduated from the Central College of Physicians and Surgeons, Indianapolis, in 1903. He was a member of the Madison County Medical Society and the Indiana State Medical Association.

WARREN D. CALVIN, M. D., 55 years of age, died suddenly on December 6 at his home in Fort Wayne following an attack of angina pectoris. Dr. Calvin was born near Bryan, Ohio, in 1867. He received his medical education from Rush Medical College, Chicago, from which institution he graduated in 1895, locating in Fort Wayne two years later, where he has resided continuously since that time. Dr. Calvin served in the World War with the rank of captain. He was always active in local civic and medical affairs, and at the time of his death was councilor for the Twelfth District Medical Society. He was a member of the Fort Wayne Medical Society, Indiana State Medical Association, Mississippi Valley Medical Association, and American Medical Association.

NEWS NOTES AND PERSONALS

Anything in the line of physicians' supplies or equipment may be obtained from advertisers in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION. Patronize these advertisers, for it means a continuance of their advertising patronage, and the latter means a larger and better Journal for you.

DR. ELLA A. HOLLIS, of Hartford City, has gone to Santa Barbara, California, where she will spend the winter.

DR. OSCAR T. SCAMAHORN, of Pittsboro, was elected president of the Seventh District Medical Society at a meeting held in Indianapolis, November 2.

THE DeKalb County Medical Society held a meeting in Auburn November 2. A paper was presented by Dr. C. S. Stewart, the subject being "Deafness."

DR. WILLIAM G. SYMON and Miss Neva Klingler, both of Garrett, were married November 3 at Peru. Dr. Symon is a member of the clinic staff at Garrett.

THE Madison County Medical Society held a meeting at Anderson, November 21. Dr. Charles Moon, of Indianapolis, presented a paper on Social Diseases.

THE Shelby County Medical Society held a meeting at Shelbyville, November 15. A general discussion of cures for cancer formed the main part of the program.

DR. EUGENE L. BULSON of Fort Wayne has been spending the past two months in the east, where he has been doing post-graduate work in eye, ear, nose and throat.

INDIANA ranks tenth in the number of cancer deaths during 1921 in the various states, according to a chart prepared by the government to be used in the observance of Cancer Week.

THE Gibson County Medical Society held a meeting at Princeton, November 13. The program consisted of a general discussion of Bright's disease and meningitis.

THE Clinton County Medical Society held a meeting at Frankfort, November 2. Dr. A. G. Chittick presented a paper on the subject of "Advantages and Disadvantages of Group Practice."

DR. CHARLES P. EMERSON, of Indianapolis, was re-elected a member of the national committee for mental hygiene at the thirteenth annual meeting of the committee held recently in New York city.

WORK has been started on the erection of the Shrine Crippled Children's hospital at St. Louis. The hospital will consist of a three-story administration building, with two ward buildings, each two stories high, having room for eighty ward beds.

THE officers of the American College of Surgeons who were elected at the annual meeting are: President, Dr. Albert J. Ochsner, Chicago; First Vice-President, Dr. Lincoln Davis, Boston; Second Vice-President, Dr. John George McDougal, Halifax.

THE medical societies of DeKalb, Steuben, Lagrange and Noble counties met in a joint session at the Community building in Kendallville, November 23. Dr. Craig, of Chicago, delivered an address. Plans were made to organize under the name of the Northern Indiana Medical Society.

THE Wabash County Medical Society held a meeting November 16, at Wabash. A paper was presented by Dr. G. T. Biggerstaff on "Protective Social Measures in Specific Diseases," and a paper by Dr. G. M. LaSalle on "Relation of Infected Teeth to Other Infections" also was presented.

THE annual session of the Indiana Academy of Ophthalmology and Otolaryngology is to be held at Claypool Hotel, Indianapolis, Jan. 17 and 18, 1923. An interesting program has been prepared. Dr. D. O. Kearby, of Indianapolis, is president and Dr. Bernard J. Larkin, of Indianapolis, is secretary.

THE Laporte County Medical Society held a meeting at Michigan City, November 9. Dr. T. Howard Plank, of Chicago, presented a paper on "High Frequency Currents in Treating Malignancies." Dr. Frank J. Novak, of Chicago, presented a paper on "Surgical Diathermy and Its Possibilities."

THE Fifth District Medical Society held a meeting November 14 at Terre Haute. The following officers were elected: Dr. J. F. Smith, Brazil, president; Dr. A. E. Rhein, Rosedale, vice-president, and Dr. Charles Wyeth, Terre Haute, secretary. Dr. William A. Jenkins, of Louisville, presented a paper.

THE following places in Indiana are without physicians at the present time: Liberty Center, Wells county; Dunreith, Hancock county; Mays, Rush county; Bippus, Huntington county, has one who wants to get away; Inwood, Marshall county; Ame and Stilesville, Hendricks county; Needham, Johnson county, has one, but another is desired, and Milhausen, Decatur county.

THE militia bureau of the War Department has allotted to Indiana the organization of a medical supply section, a medical laboratory section and a headquarters medical regiment, all to be units of the 113th medical regiment. With the exception of two hospital companies, all of the units of the regiment will be in Indiana. Headquarters of the regiment probably will be in Indianapolis.

THE St. Louis (Missouri) Medical Society has purchased ground on Lindell Boulevard adjoining Moolah Temple, where the commercial exhibits and registration bureau were located during the recent session of the American Medical Association. The ground, 150 feet square, was purchased at a cost of $22,500; this sum has been contributed by forty-five members, each paying $500.

THE Thirteenth Annual Meeting and Luncheon of the National Committee for Mental Hygiene was held at the Pennsylvania Hotel, New York City, on November 9th. Addresses were made by Dr. Haven Emerson, Professor Stephen P. Duggan and Mr. John J. Carty, of New York, Professor Elton Mayo, of the University of Queensland, Australia, and Dr. F. N. Williams, Medical Director of the National Committee.

THE National Board of Medical Examiners announces the following dates for its next examinations: Part I, February 12, 13 and 14, 1923; Part II, February 15 and 16, 1923. The fees for these examinations have been continued at the reduced rate for another year. Applications for these examinations must be forwarded not later than January 1, 1923. Application blanks and circulars of information may be obtained from the Secretary of the National Board, Dr. J. S. Rodman, Medical Arts Building, Philadelphia, Pa.

DURING November, the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Lederle Antitoxin Laboratories, Mercurialized Serum-Lederle for Intravenous Use; Charles Leich & Company, Sulfarsenol; Mallinckrodt Chemical Works, Barium Sulphate Pure-M. C. W.; H. A. Metz Laboratories, Benzosol; Parke, Davis & Company, Silvol. Arsenobenzol (Dermatological Research Laboratories) and Arsphenamine (Dermatological Research Laboratories): These products are now marketed by the Abbott Laboratories

as Neoarsphenamine-D. R. L. and Arsphenamine-D. R. L. The Council has continued the acceptance for New and Nonofficial Remedies under these names.

THE medical profession will be interested in the announcement that the Abbott Laboratories of Chicago have purchased the Dermatological Research Laboratories of Philadelphia.

It will be remembered the Dermatological Research Laboratories were the first in the United States to produce Arsphenamine during the war when there was such a scarcity of this article; and these laboratories became well known to the medical profession for their patriotic attitude in developing and manufacturing medicinal preparations in this country. By this purchase of the "DRI" products, the Abbott Laboratories inherited their prestige.

The Abbott Laboratories acquired control of the Dermatological Research Laboratories on November 1st; and are continuing to operate them in Philadelphia under the direction of Dr. Geo. W. Raiziss, head of the department of chemistry, and his corps of specially trained assistants. Orders for "DRI" products will be promptly filled from the Philadelphia Laboratories or from their branches or distributors.

DURING the year 1921 the Rockefeller Foundation continued a quarter-million annual appropriation to the School of Hygiene and Public Health, of Johns Hopkins University; pledged two million to Harvard for a school of health; contributed to public health training in Czecho-Slovakia, Brazil, and the United States; aided the Pasteur Institute of Paris to recruit and train personnel; promoted the cause of nurse training in America and Europe; underwrote an experimental pay clinic in the Cornell Medical School; formally opened a complete modern medical school and hospital in Pekin; assisted twenty-five other medical centers in China; promised a million dollars for the medical school of Columbia University; contracted to appropriate three and one-half millions for the rebuilding and reorganization of the medical school and hospital of the Free University of Brussels; made surveys of medical schools in Japan, China, the Philippines, Indo-China, Straits Settlements, Siam, India, Syria and Turkey; supplied American and British medical journals to 112 medical libraries on the continent; supplemented the laboratory equipment and supplies of five medical schools in Central Europe; defrayed the expenses of commissions from Great Britain, Belgium, Serbia and Brazil; provided 157 fellowships in hygiene, medicine, physics and chemistry, to representatives of eighteen countries; continued a campaign against yellow fever in Mexico, Central and South America; prosecuted demonstrations in the control of malaria in ten states; co-operated in hookworm work in nineteen governmental areas; participated in rural health demonstrations in seventy-seven American counties and in Brazil, neared the goal of transferring to French agencies an anti-tuberculosis organization in France; provided experts in medical education and public health for counsel and surveys in many parts of the world, and rendered sundry minor services to governments and voluntary societies. These were done in part by the Foundation directly, but chiefly through its departmental agencies—the International Health Board, the China Medical Board, and the Division of Medical Education.

SOCIETY PROCEEDINGS

COUNCILORS' MEMBERSHIP CONTEST

District	Councilor	Number of Counties	1921 Memberships	1922 Memberships to Date	Percentage
First	Dr. Willis	7	176	175	.99
Second	Dr Smadel	7	149	148	.99
Third	Dr. Leach	9	130	118	.90
Fourth	Dr. Osterman	10	138	137	.99
Fifth	Dr. Weinstein	5	158	166	1.05
Sixth	Dr. Spilman	8	150	161	1.07
Seventh	Dr. Earp	4	425	449	1.05
Eighth	Dr. Conrad	5	173	169	.98
Ninth	Dr. Moffitt	10	253	256	1.01
Tenth	Dr. Shanklin	5	151	147	.97
Eleventh	Dr. Black	6	191	194	1.02
Twelfth	Dr. Calvin	8	241	247	1.02
Thirteenth	Dr. Berteling	8	274	259	.96
		92	2608	2626	

MUNCIE ACADEMY OF MEDICINE

The regular meeting of the Muncie Academy of Medicine was held in the Roberts Hotel, Friday evening, November 17th.

Dr. E. R. Hiatt, of Pennville, read a paper dealing with "Medical Ethics and the Laity". He said in part:

My plea is for an honorable and far-reaching system of propaganda for reform in the relation of doctor and patient.

We are now feeling the pressure of an agitation for further requirements for the surgeon and other specialists. Such requirements are fitting and proper, but I feel that the practical application of medical science to our population as patients has not kept pace with the advance of medical standards required for the physician. Instead of constantly thinking up additional requirements and restrictions for him, why not make more effort to lead the public to appreciate the meaning of these requirements and to give due respect to their fulfillment?

University graduates and persons otherwise intelligent fall for the medical quack and the chiropractor. Many men of pleasing personality, with meager medical training and void of conscience, have become "successful" physicians, and by their humbuggery, inuendos or perhaps a mere shrug of the shoulder or facial expression when the opportunity presents itself, may influence his patrons, who seldom can gauge the ability and skill of the physician, against the trained and honest practitioner. Many times the renegade member of the profession is more of a menace than the blatant quack or pretender who may be a specialist in diseases of the skin and all of its contents.

Simple facts concerning epidemiology and hygiene should be understood by the public so there would be no excuse for them to fluctuate between the diversity of opinions preached by cults and faddists. No

matter how silly some of these opinions may appear to us, the laity is seldom competent to judge between fact and fiction, neither are they able to distinguish the good doctor from the bad. Many dishonest physicians are careful to meet all their financial obligations promptly and maintain a reputation for honest dealing, yet are grossly unscrupulous when the good name of their fellow physician is at stake.

I believe the public should have real education along the lines of ethics, general aims of the medical profession, public health matters, the fallacy of the quack cults, and a course of study enabling them to recognize a well trained physician.

My idea would be to have a central committee, preferably appointed by the A. M. A., prepare bulletins once a month at least, for distribution to local medical societies all over the United States, in quantities that the individual societies may deem wise to order. A mailing list could be compiled and a copy of the bulletin sent to every family. The subject matter could be carried by the local newspapers, as paid advertising if necessary. The cost of the work done by the central committee could be borne by the national society.

This would prove a powerful influence toward elevating the standards as well as the standing of the medical profession. H. D. FAIR.

TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

TETANUS ANTITOXIN, PURIFIED.—A tetanus antitoxin, concentrated (New and Nonofficial Remedies, 1922, p. 281), that is also marketed in syringe containers of 10,000 units. E. R. Squibb & Sons, New York.

STAPHYLOCOCCUS VACCINE.—This product (New and Nonofficial Remedies, 1922, p. 306) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed Staphylococcus aureus and Staphylococcus albus in equal proportion; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed staphylococcus aureus and albus in equal proportion (with a syringe); and in vials of 5 Cc., 10 Cc., and 20 Cc., each cubic centimeter containing 5,000 million killed Staphylococcus aureus and Staphylococcus albus in equal proportion. E. R. Squibb & Sons, New York.

STREPTOCOCCUS VACCINE.—This product (New and Nonofficial Remedies, 1922, p. 308) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed streptococci; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed streptococci (with a syringe) and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 1,000 million killed streptococci. E. R. Squibb & Sons, New York.

TYPHOID VACCINE.—This product (New and Nonofficial Remedies, 1922, p. 310) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed typhoid bacilli; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed typhoid bacilli (with a syringe); and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 1,000 million killed typhoid bacilli. E. R. Squibb & Sons, New York.

TYPHOID VACCINE COMBINED, IMMUNIZING.—A typhoid vaccine (New and Nonofficial Remedies, 1922, p. 310) that is marketed in packages of three syringes, one containing 500 million killed typhoid bacilli and 375 million each of killed paratyphoid A and paratyphoid B bacilli, and each of the other two syringes containing 1,000 million killed typhoid bacilli and 750 million each of killed paratyphoid A and paratyphoid B bacilli; in packages of three ampules containing, respectively, the same dosages as the three-syringe package (with a syringe); in packages of 30 ampules, hospital size; and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 2,500 million killed bacilli. E. R. Squibb & Sons, New York.

STAPHYLO-ACNE VACCINE.—A mixed bacterial vaccine (New and Nonofficial Remedies, 1922, p. 314) that is marketed in packages of four syringes, the first containing a mixture of 50 million each of killed staphylococcus albus, or killed staphylococcus aureus and of killed acne bacilli, the second containing a mixture of 125 million each of killed staphylococcus albus, of killed staphylococcus aureus and of killed acne bacilli, the third containing a mixture of 250 million each of killed staphylococcus albus, of killed staphylococcus aureus and killed acne bacilli, the fourth containing 500 million each of killed staphylococcus albus, of killed staphylococcus aureus and of killed acne bacilli; in packages of four ampules containing the same dosages as the four-syringe package (with a syringe); and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 1,500 million killed bacteria. E. R. Squibb & Sons, New York.

COLON VACCINE.—A colon bacillus vaccine (New and Nonofficial Remedies, 1922, p. 299) that is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1,000 million killed bacilli; in packages of four ampules containing, respectively, 100, 250, 500 and 1,000 million killed bacilli (with a syringe); and in vials of 5 Cc., 10 Cc. and 20 Cc., each cubic centimeter containing 5,000 million killed bacilli. E. R. Squibb & Sons, New York.—(*Jour. A. M. A.*, Nov. 4, 1922, p. 1609).

BARIUM SULPHATE PURE-M. C. W.—A brand of barium sulphate for roentgen-ray work-N. N. R. (see New and Nonofficial Remedies, 1922, p. 62). Mallinckrodt Chemical Works, St. Louis.

BENZOSOL.—A brand of guaiacol benzoate-N. N. R. (New and Nonofficial Remedies, 1922, p. 92). H. A. Metz Laboratories, Inc., New York.

NORMAL HORSE SERUM-P. D. & Co.—This product (New and Nonofficial Remedies, 1922, p. 278) is marketed in packages containing one 10 Cc. syringe container (Bio. 50); in packages containing one 10 Cc. rubber stoppered bulb (Bio. 52), and in packages containing one 30 Cc. rubber-stoppered bulb (Bio. 53). Parke, Davis & Co., Detroit.

RABIES VACCINE (CUMMING).—An antirabic vaccine (New and Nonofficial Remedies, 1922, p. 290). The virus is prepared by dialyzing a 1 percent suspension of brain tissues (from a rabbit dying of rabies induced by an injection of fixed virus) against running distilled water until the active virulent virus is destroyed. The treatment is divided into two classes: Mild, requiring 14 doses; severe, requiring 21 doses. One dose, 2 Cc., is given daily over a period of either 14 or 21 days. Each package (Bio. 440) consists of seven syringe containers of 2 Cc. each (1 dose). Parke, Davis & Co., Detroit.

SULFARSENOL.—SULPHARSPHENAMINE.—Chemically, sulfarsenol is closely related to neoarsphenamine. It contains from 18 to 20 percent of arsenic. The arnesic content of three parts of sulfarsenol is approximately equal to two parts of arsphenamine. The actions, uses and dosage are essentially the same as neoarsphenamine, but it is claimed to have the advantage over neoarsphenamine in that its solutions are more stable and in that it may be administered subcutaneously. Sulfarsenol is marketed in ampules containing, respectively, 0.06 Gm., 0.12 Gm., 0.18 Gm., 0.24 Gm., 0.30 Gm., 0.36 Gm., 0.42 Gm., 0.48 Gm., 0.54 Gm., 0.60 Gm. Chas. Leich & Co., Evansville, Ind.—(*Jour. A. M. A.*, Nov. 18, 1922, p. 1767).

PROPAGANDA FOR REFORM

ABRAM'S "OSCILLOCLAST".—This is a piece of electrical apparatus which is said to produce vibrations of varying rate. Its use is based on Abram's theory that "specific drugs possess a like vibratory rate as the diseases for which they are effective". Instead of using a drug one starts the "Oscilloclast" going, moves the indicators to the number corresponding to the vibration rate of the indicated drug and applies the instrument to the sufferer who, it is alleged, then gets the therapeutic action of the drug in question. The "Oscilloclast" is not for sale. It may be leased (for about two hundred dollars) on signing a contract that the instrument will not be opened. Within the past few months Abrams has been making bids for osteopathic patronage. The followers of the cult have not been slow to respond. The lure of the dollar and the bizarre is irresistible. Many of the lessees of the "Oscilloclast" are individuals who for years have lived in what may be called the twilight zone of professionalism where it is difficult to distinguish between the visionary with a fad and the quack or near-quack with a scheme.—(*Jour. A. M. A.*, Nov. 4, 1922, p. 1626).

CAROID.—This is a preparation of papain (obtained from papaya). Caroid was first marketed by the American Ferment Co. and later by Mead, Johnson & Co. For a considerable time the Council on Pharmacy and Chemistry had Caroid under consideration and in the end rejected the product on account of its variability. Although Caroid was found more active than other preparations of papain, examination showed that the claims for its digestive efficiency were exaggerated. Since the publication of the Council's report in 1914, Mead, Johnson & Co. do not seem to have made any propaganda for Caroid. It is now being promoted by the American Ferment Co., but this firm has not requested a consideration of the product by the Council.—(*Jour. A. M. A.*, Nov. 4, 1922, p. 1629).

THE A. M. A. CHEMICAL LABORATORY.—When, some seventeen years ago, the Council on Pharmacy and Chemistry began its work of turning the light on proprietary medicines its main concern was to let physicians know the composition of many of the proprietary medicines widely advertised in medical journals. At that time the exposure of false or vague and meaningless declarations of identity was considered of basic importance. This fact is shown by the name of the Council and by the appointment at that time of many chemists and pharmacists as members of the Council. This need for work which should bring home to the medical profession the essential secrecy of the drug preparations which they were asked to prescribe lead also to the establishment of the A. M. A. Chemical Laboratory. The initial reports of the Council gave the medical profession the first definite statement of many proprietaries then advertised extensively. Though many of these proprietaries were offered to the profession as new chemical discoveries, they were, in fact, simple mixtures of well known chemicals and their analysis presented little difficulty. As the result of this work of the Council and the Laboratory most promoters of pharmaceutical specialties know better than to invest money in the exploitation of mixtures the sale of which would be interfered with when there is a disclosure of its composition. But this does not mean that today the composition of all proprietaries is correctly declared. Proprietaries are still to be found which sail under false colors as to their composition.

The work of the Chemical Laboratory, however, has become more difficult. Instead of analyses of mixtures, the Laboratory has to do with new compounds of novel composition which do not have the chemical composition or chemical constitution ascribed to them. A report of the Council on Pharmacy and Chemistry of Galyl is an example of the more difficult work now required of the Laboratory. The Laboratory investigated the product and reached the conclusion that its administration amounted to the giving of arsphenamin (in the form of the sodium compound) with extraneous inorganic material, and thus obviated the need of comparative clinical trials of Galyl with arsphenamin.—(*Jour. A. M. A.*, Nov. 11, 1922, p. 1690).

BARIUM SULPHATE FOR ROENTGEN-RAY WORK.—A manufacturer of barium sulphate for Roentgen-ray work reported to the Council on Pharmacy and Chemistry that, though its product is free from objectionable impurities and equal to that of other brands on the market, it was confronted with the difficulty that its product, when tested by the standards of New and Nonofficial Remedies, appeared to contain acid-soluble barium salts. It urged that the phosphate test be omitted in that it showed a noticeable phosphate reaction when barium phosphate is totally absent but when a non-poisonous and unobjectionable phosphate (such as calcium phosphate) was present. The manufacturer submitted the tests which he employed, which also included a test for the fineness (fluffiness) of the product.

The A. M. A. Chemical Laboratory deemed the objection to the phosphate test well founded and the proposed revision of the test for soluble barium and the "fluffiness" test worthy of consideration. The laboratory submitted the suggested tests to the firms whose brands of barium sulphate stood accepted for New and Nonofficial Remedies and also to a group of users of barium sulphate. In general the manufacturers agreed to the proposed new tests. Many of the users of barium sulphate held, however, that extreme fineness was not essential. Several objected to the high price charged for some of the very finely divided products. In consideration of the available evidence, the Laboratory recommended to the Council that the "fluffiness" test be not adopted, that the phosphate test be omitted and recommended in its place a test which will require reasonable freedom from foreign salts along with tests which shall guarantee freedom from water and acid soluble barium salts and freedom from heavy metallic salts. The Council agreed to the recommendation of the Laboratory and directed that the recommended revision of the tests be adopted for New and Nonofficial Remedies, 1923.—(*Jour. A. M. A.*, Nov. 11, 1922, p. 1687).

GALYL.—In 1918 Geo. J. Wallau, Inc., acting as U. S. distributor for Galyl (manufactured by A. Naline, Garenne, France), requested the Council on Pharmacy and Chemistry to consider the product. At that time Galyl was stated to be a compound made up of two arsphenamin molecules linked by means of two phosphorus groups. The product was insoluble in water and for use had to be dissolved in sodium carbonate. It was claimed to be less toxic than arsphenamin, quicker of action on spirilla and of equal therapeutic value. Later the composition of Galyl was changed. The "new" Galyl was stated to be a sodium salt of the "old" Galyl. The A. M. A. Chemical Laboratory investigated the new Galyl and concluded that, if the compound has the composition claimed for it, it is easily decomposed; that when prepared for administration either it is partly decomposed into sodium phosphate and sodium arsphenamin or else the original product contains sodium arsphenamin and free phosphate. In either case, injection will probably amount to the administration of phospharsphenamin (if any is present), sodium arsphenamin, sodium phosphate, sodium sulphite and sugar. In December, 1921, the Laboratory report was sent to the agent and by him transmitted to the French manufacturer. No evidence was received to controvert the findings of the Laboratory that Galyl does not have the composition claimed for it. On the other hand, the findings have been supported by independent investigators. Accordingly

the Council declared Galyl inadmissible to New and Nonofficial Remedies because the evidence indicated that it does not have the composition claimed for it; because the therapeutic claims are unwarranted; and because its use under another name than sodium arsphenamine with deceptive claims for its composition is irrational and a detriment to rational therapy.—(*Jour. A. M. A.*, Nov. 11, p. 1706).

HABITUAL USE OF BARBITAL.—The constant use of even small doses of barbital (veronal) affects the central nervous system. Those taking the drug habitually become much debilitated and seem less able to stand moderate doses. Death has occurred from a 3 gm. dose in addicts. In Great Britain barbital (veronal) has been classified as a poison. Many cases of poisoning occur from its indiscriminate use by the laity.—(*Jour. A. M. A.*, Nov. 11, 1922, p. 1709).

"PATENT MEDICINE" SECRECY.—For years the medical profession has insisted that the real reason that nostrum makers keep the composition of their products secret is (1) for the glamour that such secrecy throws around them, and (2) the fact that so long as the public does not know what is in a preparation the advertiser's imagination is given freer play. The "Patent Medicine" makers, on the other hand, have maintained that their reason for keeping the composition of their products secret is that the formula is personal property and, if made known, the market would be flooded with imitations. Recently, however, *Standard Remedies*, the mouthpiece of the "patent medicine" interests, has admitted that the medical profession was right and the "patent medicine" makers wrong. It stated editorially: "It should be remembered that while a developed formula has a great value, it is the trade name, the advertising, the merchandising skill applied in connection with it that creates its valuable good will. Ten to one a thorough search through books of formulæ will reveal that your own is already known to the medical world. But no one can get the same benefit from it that you have gained unless they spend in merchandising it the same money that you have spent."—(*Jour. A. M. A.*, Nov. 11, 1922, p. 1692).

APROTEIN AND APROTINE NOT ADMITTED TO N. N. R.—Aprotein and Aprotine are casein preparations marketed as "the foremost tissue and body builders" by the John Norton Co., Columbus, Ohio. Aprotein (formerly designated Aprotein No. 2 Granulated Food Casein) is described in the advertising issued by the John Norton Co. (formerly the Diaprotein Co.) as a "scientifically, specially prepared granulated casein precipitated from fresh skimmed milk, concentrated to a high degree". The Council declared Aprotein inadmissible to New and Nonofficial Remedies because (1) its composition does not agree with a good dietetic casein and was not found to have the composition claimed for it, and (2) it is not only irrational but also a hindrance to therapeutics to market a well known substance like casein under a fanciful name. Aprotine, in the information sent the Council, is designated "a sodium calcium caseinate derivative" prepared by precipitating an acid calcium caseinate from skimmed milk by the addition of acid, washing the precipitate, mixing it with sodium bicarbonate and drying. A comparison of the analyses furnished the Council suggests that Aprotine and Aprotein are the same. The advertising claims suggest that Aprotine has therapeutic properties, whereas its effects will not differ from those of cottage cheese. The Council on Pharmacy and Chemistry declared Aprotine inadmissible to New and Nonofficial Remedies because (1) the statements made in regard to its composition are indefinite and misleading, (2) the therapeutic claims are unwarranted, and (3) there is no evidence to indicate that this casein preparation presents an improvement over casein-N. N. R.—(*Jour. A. M. A.*, Nov. 18, 1922, p. 1786).

THE PITUITARY HORMONE.—So far the active principle of the pituitary gland has not been isolated. It is possible that the pituitary contains more than one physiologically potent constituent. Perhaps both pressor and depressor compounds are derivable from the gland structures. Abel and Rhuiller have prepared products from the infundibulum which have both vasomotor and oxytocic effects. These investigators believe that if the product is obtained in the pure state, it will be fifty times more active than histamin, and that there is but a single specific hormone in the infundibulum, and that this has both vasomotor and uterus-stimulating properties as well as a powerful effect on the kidneys. The hope of a speedy isolation of this pituitary hormone as a chemical entity is somewhat shattered by the fact that it is unstable in laboratory manipulations.—(*Jour. A. M. A.*, Nov. 18, 1922, p. 1770).

ADAMS' WONDER CAPSULES.—In newspaper advertisements women and girls are urged to call at some local drug store and talk about their ailents with a kind, motherly woman of the experience and sympathetic understanding of Mrs. Gene Case. This noted "health advocate" recommends Adams' Wonder Capsules for girls and women who are "troubled with periodical pains", cramps and headache at menstrual time or who have neuritis, neuralgia, stomach, bowel or bladder pain * * *" The A. M. A. Chemical Laboratory examined Adams' Wonder Capsules and found that the capsules contained the recently introduced drug, benzyl succinate.—(*Jour. A. M. A.*, Nov. 25, 1922, p. 1876).

BI-OXO-DYN NOT ADMITTED TO N. N. R.—Bi-Oxo-Dyn is put out by "Bi-Oxo-Dyn", Savannah, Ga., according to the information furnished the Council on Pharmacy and Chemistry by W. F. Kennedy, Jr., who states that he is the maker and originator of the product. It is to be inferred that Bi-Oxo-Dyn contains 2 percent of free (elementary) iodin and 0.1 percent of hydrastin, 3 percent of chloral hydrate, 14 percent of bismuth hydroxide, 1 percent of menthol in a petrolatum base, and from 0.5 to 1.0 percent of a compound of succinyl peroxid and boric acid. However, the A. M. A. Chemical Laboratory reported that Bi-Oxo-Dyn contains no free iodin, but that it contains combined iodin in the form of iodid ions and that the presence of hydrogen peroxid or other peroxids could be demonstrated. The claim is made that Bi-Oxo-Dyn is of inestimable value for injection into the urethra and it is recommended in specific urethritis, uterine hemorrhage and painful chordee.

The Council declared Bi-Oxo-Dyn inadmissible to New and Nonofficial Remedies because (1) the statements of its composition are indefinite, misleading and incorrect, (2) the therapeutic claims are unwarranted, (3) the name is not descriptive of the composition of the product, and (4) Bi-Oxo-Dyn is a complex irrational mixture the marketing of which is detrimental alike to the interests of the public and of scientific medicine.—(*Jour. A. M. A.*, Nov. 25, 1922, p. 1867).

COMMERCIAL VITAMIN PREPARATIONS.—No student of the subject of vitamins can fail to recognize the ridiculousness of recent attempts to supply alleged vitamin-bearing preparations as cure-alls. It is doubtful if any latent, not to say evident, avitaminosis is prevalent in this country. Nevertheless, preparations sold to supply this alleged need of vitamins should at least not be fraudulent. E. P. Bailey of the Connecticut Experiment Station has determined the potency of some commercial vitamin preparations as compared with that of dried brewers' yeast. The report stated that apparently many manufacturers are not convinced of the efficiency of their vitamin preparations and, therefore, have added various medicaments of established reputation in therapeutics

for good measure and to ensure a reaction of some description. Bailey compared the potency of the products on the reasonable assumption that a preparation which in a 100 mg. dose does not exhibit the potency shown by 100 mg. of a good grade of dry brewers' yeast employed under comparable conditions does not justify a claim of superior therapeutic value as a source of water-soluble B vitamin. On this basis, nearly half of the advertised products failed. Others showed only inferior content of vitamin. A few of the products equaled good brewery yeast in potency and only two or three products among nearly two dozen examined showed any superiority of "concentration" over ordinary yeast.—(*Jour. A. M. A.*, Nov. 25, 1922, p. 1846).

THE "PROPAGANDA FOR REFORM" IN GERMANY.—An effort to establish a German Council on Pharmacy and Chemistry was made in Germany before the war. In spite of the demoralizing effects of the war, efforts are again being made in Germany toward the establishment of such a council. A commission of the Aerztevereinsbund, including such well-known men as Professor Heffter, Klemperer, Lenhoff and Schwalbe, has issued an appeal directed particularly against the misleading or fraudulent advertising still so common in many medical journals.

To acquaint the German medical profession with the method of the A. M. A. Council on Pharmacy and Chemistry and the changes that have been brought about in the Unietd States, the Deutsche Medizinische Wochenschrift of which Dr. Schwalbe is editor recently published a lengthy article that detailed the organization, aims and objects and accomplishments of the Council.—(*Jour. A. M. A.*, Nov. 25, 1922, p. 1848).

BOOK REVIEWS

RADIUM THERAPY. By Frank Edward Simpson, A.B., M.D., Professor of Dermatology, Chicago Polyclinic; Adjunct Clinical Professor of Dermatology, Northwestern University Medical School, etc. 166 original engravings; cloth, 392 pages. Price $7.00. C. V. Mosby Company, publishers. St. Louis, 1922.

At present there is a widespread interest in radium therapy. It is possible that radium as a therapeutic agent has fallen into disrepute in some quarters as a direct result of the unjustifiable enthusiasm on the part of some physicians, as well as through the employment of radium by those who put forth neither the time nor the effort required to study the effects of radium, the proper mode of application, and its good as well as ill effects. That radium therapy has a field of usefulness in a variety of affections is unquestioned, and in certain pathological conditions the results brought about by radium therapy are almost miraculous. However, radium is impotent as well as dangerous except when used judiciously and with intelligence. Therefore, in view of the widespread interest in the subject, this book by an authority should be welcomed by the medical profession and ought to have a large sale. The essayist discusses radium from every angle, including origin and chemical nature, physical, chemical and biological effects of the rays, dosage, technic, and the therapeutic uses in general surgery, gynecology, dermatology, ophthalmology, otology, and laryngology, diseases of the ductless glands and in internal medicine. The book is made more interesting by case histories and a very large number of original illustrations. The injurious effects of radium also come in for intelligent discussion, and the book closes with a very comprehensive bibliography. Throughout the entire work the author discusses the subject intelligently and temperately.

HYGIENE, DENTAL AND GENERAL. By Clair Elsmere Turner, Assistant Professor of Biology and Public Health in the Massachusetts Institute of Technology; Assistant Professor of Hygiene in the Tufts College Medical and Dental Schools. With chapters on Dental Hygiene and Oral Prophylaxis by William Rice, Dean, Tufts College Dental School. Cloth, pp. 400. Price $4.00. C. V. Mosby Company, St. Louis, 1920.

Multum in parvo is an expression that may be applied most appropriately to this excellent little work on hygiene. Not only is the book of value to the dentist, but equally so to the doctor and indeed there is so much information on personal hygiene contained in it that even the layman would needs be intensely interested in it. A surprising amount of ground is covered and the information is of the most accurate and practical kind.

THE SYMPTOMATIC TREATMENT OF GONORRHEA IN THE MALE. By Norman Lumb, O.B.E. Late R.A.M.C. Specialist in Venereal Diseases, and Officer-in-Charge of Division, 39 and 51 General Hospitals, B.E.F.; Clinical Assistant, St. Peter's Hospital for Stone. Second Edition. Cloth, pp. 123. Price $1.75. Lea & Febiger, Philadelphia, 1920.

The little volume offers a remarkably concise resumé of the subject of gonorrhea and its treatment from a modern standpoint. The newer methods of cultivation and the complement fixation test are featured as earlier diagnostic agencies and considerable enthusiasm is displayed by the author in the therapeutic use of vaccines, even in the very acute stage.

THE PRACTICAL MEDICINE SERIES. Volume 2 General Surgery. Edited by Albert J. Ochsner, M.D., F.R.M.S., L.L.D., F.A.C.S., Surgeon-in-Chief Augustana and St. Mary's of Nazareth Hospitals; Professor of Surgery Medical Department, University of Illinois, Series 1920, Chicago. The Year Book Publishers. Cloth, pp. 620. Price $3.50.

Although there is an unpleasant abbreviation of words in this volume, the text throughout is comprehensive and interesting. While that part devoted to abdominal surgery is more extensive yet much that is worth while in goitre and other thoracic surgery is reviewed.

One cannot refrain from calling attention to the simple method of citrate transfusion by means of an Erlenmeyer flask, as devised by Farr and Gilroy.

All told the volume this year is very complete and satisfying.

SHORT TALKS ON PERSONAL AND COMMUNITY HEALTH. By Louis Lehrfeld, A.M.M.D., Agent for the Prevention of Disease, Department of Public Health, Philadelphia. With Introduction by Wilmer Krusen, M.D., L.L.D. Director Department Public Health and Charities, Philadelphia. Cloth, pp. 271. Price $2.00. F. A. Davis Company, Philadelphia, 1920.

The problem of community health today is more than ever, one of prevention rather than cure of disease. Hency any agent that will aid in the education of the public along the lines of the prevention of disease will prove an asset to both laity and medical profession. This short, concise series of health talks should prove invaluable in spreading the gospel of disease-prevention and public health through schools, industrial plants, community meetings, social service agencies, churches or what not. Indeed it would be a most valuable addition to the library of any home, professional or otherwise.

MATERNITAS—A Book Concerning the Care of the Prospective Mother and Her Child. By Charles E. Paddock, M.D., Professor of Obstetrics, Chicago Post-Graduate Medical School; Assistant Professor of Obstetrics, Rush Medical College; Attending Obstetrician St. Luke's Hospital. Cloth, pp. 210. Price $1.75. Published by Cloyd J. Head & Co., Chicago, Illinois.

A truly satisfying little work is here presented that should prove most useful to the prospective and new mothers. One of its chief charms is the rare good common sense offered in answer to many of the time-honored superstitions with which the expectant mother is burdened by over-solicitous friends. This third edition has been carefully revised and much new material, as well as drawings, added.

THE RADIOGRAPHY OF THE CHEST. Volume 1. Pulmonary Tuberculosis. With nine line diagrams and ninety-nine radiograms. By Walker Overend, M.A., M.D. (Oxon), B.Sc. (Lon.), Hon. Radiologist and Physician to the Electrotherapeutic Department, East Sussex Hospital (Hastings); Radiologist to the City of London Hospital for Disease of the Chest (during the War); etc. St. Louis, C. V. Mosby Company, 1920. Cloth, pp. 119. Price $5.00.

At an age when conquest over tuberculosis has resolved itself largely into a question of early diagnosis that agent is most welcome which aids materially in the elucidation of the earliest positive findings. The time has come when no medical man desires to wait for the sputum to show tubercle bacilli before making a diagnosis for it is only the fortunate few whose lesions are sufficiently close to a bronchus as to discharge them in the sputum early in the disease. Nor is the indiscriminate use of tuberculin diagnostically to be encouraged for it is quite possible at times to produce untoward effects thereby.

If then we are able to correlate all the clinical data with carefully interpreted x-ray findings, realizing the pitfalls and possible shortcomings of each, we are then rendering our patient the most conservative service possible. For such purposes this work is admirably adapted, being illustrated as it is by a profusion of most instructive skiagrams. While all x-ray negatives lose materially in detail and diagnostic value in print reproduction yet sufficient remains to warrant the appearance of such a book as this one.

The author repeats what has been argued many times, viz., that the greatest accuracy in the diagnosis of pulmonary tuberculosis can only come by the combined study of the history, symptomatology, physical and laboratory findings and the x-ray data.

THE PROPAGANDA FOR REFORM IN PROPRIETARY MEDICINES, Vol. 2, 1922. Containing Reports of the Council on Pharmacy and Chemistry and Contributions from the A. M. A. Chemical Laboratory and from *The Journal of the American Medical Association*. Cloth. Price, $2.00. Pp. 603 with illustrations. Chicago: American Medical Association, 1922.

The present book is the second volume of the "Propaganda for Reform in Proprietary Medicines." The first volume ran through nine editions. The ninth edition contained (1) the most important reports of the Council on Pharmacy and Chemistry, (2) the reports of the A. M. A. Chemical Laboratory, and (3) those articles from *The Journal of the American Medical Association* which deal with the problems of proprietaryship in medicine and the furtherance of rational drug therapy. All of this material covered a period prior to 1917.

The present (second) volume contains similar material covering the period from January, 1917, to April, 1922, inclusive.

The index in this new volume is, in effect, a bibliography, including references not only to articles in the book but also (*a*) to articles which appeared in Volume 1; (*b*) to articles on the same general subject in *The Journal of the American Medical Association*, and (*c*) to articles appearing in the annual reports of the Council on Pharmacy and Chemistry and of the A. M. A. Chemical Laboratory, but not printed in either volume of the Propaganda for Reform in Proprietary Medicines.

This book is not only valuable for the information it contains, but it is also interesting. It shows up the technique of the artist in the sale of proprietary medicines, tells of his skillful word-pictures that are sent to the physician as "literature". It makes clear the work of the Council on Pharmacy and Chemistry, the A. M. A. Chemical Laboratory and *The Journal of the American Medical Association* in their several capacities as servants to the medical profession and as champions of rational medicine. The book should be in every physician's library, and more than that, should be within reach for convenient reference.

1920 COLLECTED PAPERS OF THE MAYO CLINIC, Rochester, Minnesota. Octavo of 1392 pages, 446 illustrations. Philadelphia and London: W. B. Saunders Company. Cloth, $12.00 net.

The annual volume of the Collected Papers of the Mayo Clinic is always awaited by the surgical profession with great interest. This volume, like the previous ones, appears under the editorship of Mrs. M. H. Mellish. It contains 118 individual papers by 60 contributors. A comprehensive work of this character cannot be systematically reviewed. Of course, there are certain papers which deserve special attention. C. H. Mayo's paper on Gastric and Duodenal Ulcers together with Carman's article on the Roentgen Diagnosis and Localization of Peptic Ulcer will be carefully read by everyone interested in the subject of gastric surgery. Pemberton's contribution to the Surgery of Substernal and Intrathoracic Goiters is very instructive. W. J. Mayo's paper on Mortality and End Results in Surgery will be read with attention and respect—he considers the results of the 10,280 operations which were performed in St. Mary's Hospital during 1919. Rosenow's Studies in Influenza and Pneumonia cover 145 pages. This work covers such a variety of subjects that it must appeal to the general medical profession. The Reviewer is willing to bestow the highest praise of which he is capable upon this volume.

DISEASES OF WOMEN. By Harry Sturgeon Crossen, M.D., F.A.C.S., Clinical Professor of Gynecology, Washington University Medical School, and Gynecologist in Chief to the Barnes Hospital and the Washington University Dispensary, etc. Fifth Edition. Revised and Enlarged. With nine hundred thirty-four engravings, including one color plate. Cloth, $10.00. St. Louis: C. V. Mosby Company, 1922.

It is a great pleasure to have placed before us again a new edition of Dr. Crossen's Diseases of Women. This book deserves its position as one of the popular American text-books. The author has made an earnest effort to bring all subjects up to date. One notes this effort particularly in the discussion of the advances in x-ray and radium therapy in their relation to malignant disease and uterine myoma. Dr. Crossen's teaching in regard to the treatment of carcinoma of the cervix uteri is fundamentally sound. He states: "In early operable cases, that is, in those cases apparently confined to

the uterus, I feel that immediate removal of the uterus and adjacent tissues likely to be involved is the safest plan," and "In order to give the patient the best chance in these early cases it is advisable to employ both radium and operation." His views regarding the present status of the treatment of myomata are in agreement with those of most pelvic surgeons. A new subject, dealt with in this edition, is Endometrial Cysts of the Ovary—the author closely follows the excellent article by Sampson (Arch. of Surg., Sept., 1921). The advances in endocrinology as it relates to gynecologic conditions has been noted by Dr. Hugo Ehrenfest, who wrote the chapter on this subject in the preceding edition. In the chapter on "Preparation for Abdominal Section" the reviewer notes with pleasure that Crossen has abandoned prolonged dieting and purging. It is interesting to read the following: "Formerly the author took particular pains thoroughly to saturate the patient with water before operation, for the purpose of aiding the kidney action after operation and diminishing the thirst, but he has discontinued the practice as a routine because he found certain drawbacks—the principal one being that it interfered with spontaneous urination after operation." The author is still among those who believe that every patient should have a bowel movement upon the third day after operation.

DISEASES OF THE THYROID GLAND. By Arthur E. Hertzler, M.D., F.A.C.S., Professor of Surgery in the University of Kansas School of Medicine; Surgeon to the Halstead Hospital, Halstead, Kansas; Surgeon to St. Luke's Hospital and St. Mary's Hospital, Kansas City, Mo., and to the Provident Hospital, Kansas City, Kansas. One hundred and six original illustrations. Cloth, $5.00. St. Louis: C. V. Mosby Company, 1922.

This book of two hundred and forty-five pages will be of interest to the surgeon who is familiar with the surgery of the thyroid. It is a pure, surgical monograph and is not entitled to the comprehensive title of "Diseases of the Thyroid". It is not a safe book for the tyro in thyroid surgery as it is wholly an exposition of Hertzler's ideas—and his ideas are not always sound. There is much truth in the author's contention that the small country hospital drawing its patrons from the immediate community is best able to study end results. Granting this statement it is unfortunate that in this book "the presentation of statistics has been designedly avoided". We are able to learn nothing regarding the number of the author's cases, his permanent cures or his mortality. He devotes about one page to the subject of Basal Metabolism and in this connection states "a good laboratory man may be of much help to the inexperienced clinician but to the experienced surgeon the aid is relatively little". Men like Crile and Lahey will enjoy reading that so far as the anesthetic is concerned "but two, ether and novocaine, need be considered though a few surgeons employ nitrous-oxide-oxygen anesthesia". The book is splendidly printed and the illustrations by Tom Jones are, of course, excellent.

INJURY, RECOVERY AND DEATH IN RELATION TO CONDUCTIVITY AND PERMEABILITY. By W. J. Osterhaut. Cloth, $2.50. Philadelphia and London: J. B. Lippincott & Company, 1922.

The author is professor of botany at Harvard University and the book is one of a series of Monographs on Experimental Biology. The author endeavors to treat certain aspects of biology according to the spirit and methods of the exact sciences. After an introduction takes up the problem of Methods of Measuring Electrical Conductivity, The Mechanism of the Process of Death, Injury and Recovery, Antagonism, Anesthesia, Conductivity and Permeability and concludes with a bibliography. This book will be read by anyone interested in the subject of experimental biology.

A MANUAL OF PHARMACOLOGY AND ITS APPLICATIONS TO THERAPEUTICS AND TOXICOLOGY. By Torald Sollmann, M.D., Professor of Pharmacology and Materia Medica in the School of Medicine of Western Reserve University, Cleveland. Second edition, entirely reset. Octavo of 1066 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $7.00 net.

This work by a distinguished author is in its second edition and represents all the late advances and developments of pharmacology up to the present time. The revision has required that the book be reset from cover to cover and in doing so some valuable new features have been incorporated. The arrangement is especially desirable in that two sizes of type have been used throughout, the larger type giving a connected and concise statement of the essentials of pharmacology; the smaller type containing more detailed data for consultation. The author also has considered the practical uses to which the book will be put and those drugs that are generally used are given extensive consideration. The new drugs and remedies are emphasized with definite instructions for their use. The section concerning prescription writing is simple, easily understood, and will fully equip the student for the correct writing of prescriptions. The tabulation of average doses classified with reference to their importance will prove a ready and valuable reference. This new volume is improved by the addition of much knowledge acquired during the late war. The war gases and the newer antiseptics are included in the discussion. An extensive bibliography will prove valuable to those who wish to investigate subject further.

ENDOCRINE GLANDS AND THE SYMPATHETIC SYSTEM. By P. Lereboullet, P. Harvier, H. Carrion and A. G. Guillame. Translated by F. Raoul Mason, M.D., Instructor in Pediatrics New York Post-Graduate Medical School and Hospital, with the collaboration of Daniel R. Ayres, A.B., M.D., Assistant Professor of Gynecology, New York Post-Graduate Medical School and Hospital. Cloth, 378 pages. J. B. Lippincott Company, Philadelphia.

This American edition represents a translation of the original French text. Consequently it is an expression of the French viewpoint of endocrinology, and perhaps French physicians more than any others have been deeply interested in the subject and done most to put endocrinology upon a rational basis. Therefore, American physicians will welcome this translation of a new textbook containing the latest views on the subject from the French standpoint.

As the translator well says, there is no subject in medicine at the present time which has aroused such a widespread interest as endocrinology. On the other hand there is no subject that is so little understood and in the practical application of which so many extravagant claims have been made by enthusiasts. In fact we are inclined to believe that our French confreres, the authors of this textbook, may be classed as enthusiasts, even though they have tried to avoid extravagance in statement. That there are numerous disturbances of internal secretion giving rise to troublesome symptoms and pathological conditions we all will admit, and while it is entirely possible that many of these conditions are now amenable to treatment with glandular extracts, it remains to be proven to unbiased minds that glandular extracts are applicable in such a wide field of therapeutic use as indicated by the claims put forth by certain endocrinologists and in a measure sustained by even the authors of the textbook under

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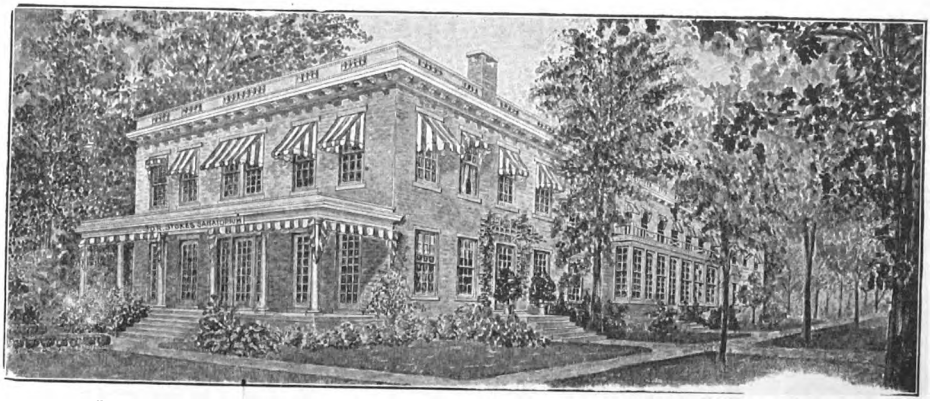
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consideration. In the main the authors have been conservative, and are frank enough to state that certain recent facts have been omitted as not having as yet been sufficiently controlled by unprejudiced observers. The book will be read with profit and interest and the professional standing of the authors justifies a careful consideration of the subject as presented. The book probably represents the latest word in endocrinology from those whose opinions deserve some consideration. The chapters on the pathology of the sympathetic system are excellent and form a valuable addition to the work.

DISEASES OF THE SKIN. By Henry H. Hazen, A.B., M.D., Professor of Dermatology in the Medical Department of Georgetown University and Professor of Dermatology in the Medical Department of Howard University. Formerly assistant in Dermatology in the Johns-Hopkins University. Second edition. Cloth, 625 pages, $7.50. C. V. Mosby Company, St. Louis, 1922.

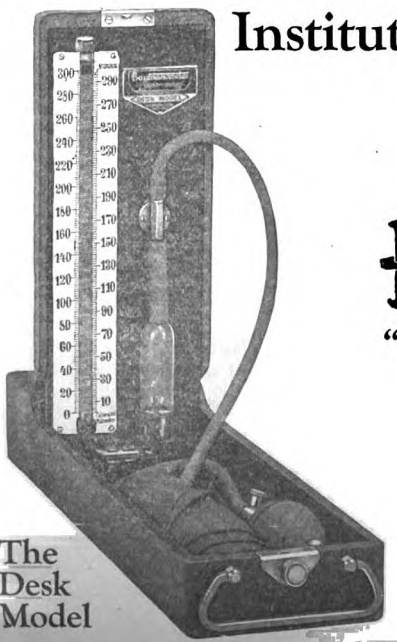
In preparing this second edition the author has rewritten the entire book with a view to bringing it entirely up to date as well as with a view to emphasizing certain features of most importance from a practical standpoint, as for instance, the pathology and treatment of syphilis, and x-ray and radium treatment of various diseases. The section upon eczema has been given special consideration in view of the changing ideas concerning the disease. A number of diseases not mentioned in the first edition have been included, and these are disturbances due to the vegetative nervous system, neavus and anemicus, and retention cyst of the lip. The author has succeeded in an endeavor to get away from the voluminous books which are not practical for either students or general practitioner. Very properly the author has emphasized the commoner skin diseases and their treatment. The illustrations, of which there are nearly three hundred, serve admirably in elucidating the text. The reader will appreciate the systematic way in which all of the subjects have been handled and the terse descriptions covering all phases of the discussion, including treatment. All in all, the book is a splendid text book for students and a valuable reference book for the general practitioner.

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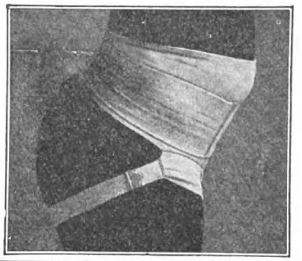
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URINE IN SYPHILIS

The urine was examined by JOSEPH VICTOR KLAUDER and JOHN A. KOLMER, Philadelphia (*Journal A. M. A.*, Jan. 8, 1921) in forty-three cases of untreated primary syphilis, the duration of which was from a few days up to the time of cutaneous manifestations. Urinary abnormalities were present in three cases. The urine was examined in forty-six cases of untreated secondary syphilis. Urinary abnormalities were present in four cases. The positive cases all showed albumin and granular casts, excepting two in which casts were absent. In two cases, red blood cells were present. The albumin consisted of a trace, except that in two of the secondary cases a light cloud was present with many granular casts, and in one red blood cells. The urinary abnormalities disappeared after treatment with arsphenamin and mercury. The clear blood serum and the urine, from the same patient, were mixed for the presence of precipitin or precipitogens in serum or urine. The serums and urine of twenty acute untreated secondary cases were tested in this manner. The results were negative in all. Either the antibody is absent in the serum, or the antigen from the urine or both may be absent, as indicated by the results. The Wassermann reaction was performed with the urine of sixty patients with syphilis in the different stages of the disease, many presenting acute symptoms and being untreated. Every patient yielded a positive blood Wassermann reaction, the majority of reactions being strongly positive with three different antigens. Of the sixty cases, the urines in but two yielded positive reactions. There is no characteristic feature in the urine of paroxysmal hemoglobinuria of syphilitic origin which serves to differentiate it from the same condition due to other causes. Results with urinary tests for syphilis were of no value as a means to the diagnosis of syphilis.

PREVENTION OF DIABETES MELLITUS

An analytical study of a considerable number of cases, as detailed in various life and mortality tables, leads ELLIOTT P. JOSLIN, Boston (*Journal A. M. A.*, Jan. 8, 1921) to formulate this diabetic law: *It is rare for diabetes to develop in an individual above the age of 20 years who is habitually underweight, and when it does so develop the case will usually be found to be either extremely severe, extremely mild, or associated with a marked hereditary taint or degenerative stigma.* The tendency to diabetes appears to be congenital. It is more intense in childhood; but, escaping that period, the individual is less and less likely to acquire the disease if he remains underweight, whereas in the obese the tendency finds a fertile soil. In the fat the predisposition may be no greater, but the external cause is more provocative. Diabetes occurs seventy-nine times more often in those more than 20 per cent overweight than in those more than 20 per cent underweight. Nervous excitement or nervous strain has also been considered a factor in the etiology of diabetes. It is notable, however, that soldiers returning from the front did not show sugar in the urine. The preponderant influence of obesity on the development of diabetes explains various peculiarities in diabetic case histories. In the presence of a wasting disease, diabetes is almost unknown. If the principle of low nutrition is effective in treatment, how much more will it be effective in prevention! And this the statistics of the 1,000 cases analyzed by Joslin prove. For the prevention of more than half of the cases of diabetes in this country, no radical undernutrition is necessary; the individual is simply asked to maintain the weight of his average fellowman.

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Elixir of Enzymes contains the curdling ferment and may be used for making junket or curds and whey. Add one teaspoonful of the Elixir to half pint of lukewarm milk, stir thoroughly and let stand till cool.

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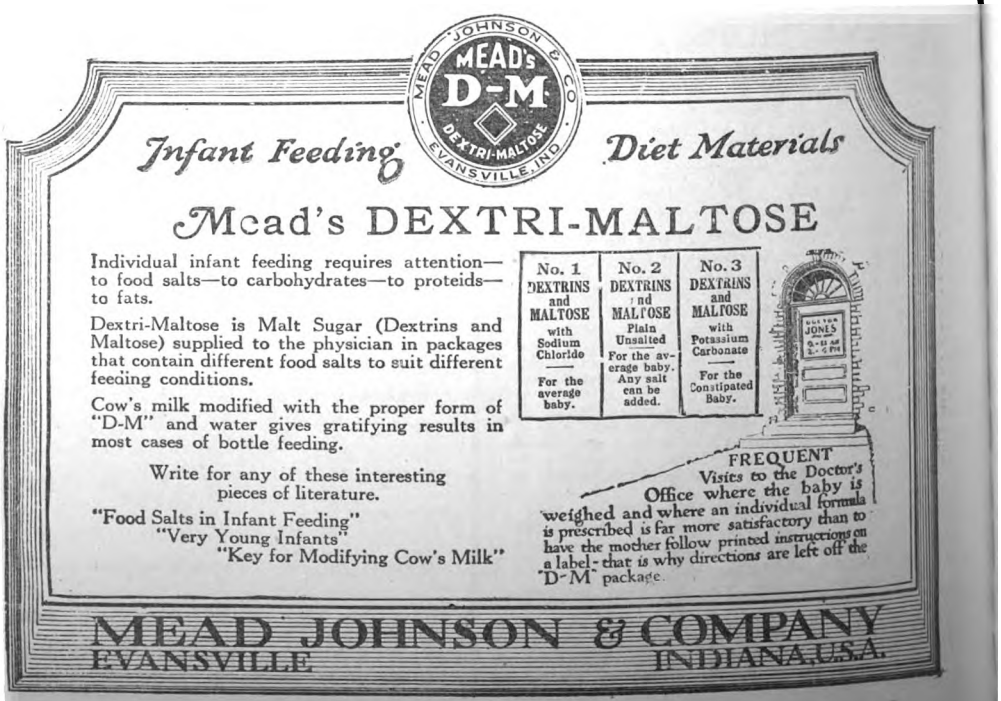
Were used with apparent good results in the treatment of the cases of mental disturbances reported.

Hynson, Westcott & Dunning
BALTIMORE

PROGNOSIS OF NEPHRITIS IN CHILDHOOD

A study was undertaken by RICHARD F. JAMES, Boston (*Journal A. M. A.*, Feb. 19, 1921) to determine (1) how many patients that had had acute nephritis recovered entirely; (2) how many developed the chronic type; (3) the present condition of the chronic type, and (4) the ultimate prognosis. Seventy children who had had nephritis the last sixteen years were examined. The examination included the cardiovascular system, hemoglobin, urinalysis, present health of the child, record of the patient's condition while under treatment and the etiology. Nine of the sixty-seven cases, or 13.3 percent, terminated in the chronic type, and of these only two could be considered severe. All of the sixty-seven patients who had had acute nephritis are living under normal conditions, on ordinary diet; and in every case the urine was found to be negative. Of twelve fatal acute exudative cases, one patient had an associated tuberculous peritonitis and one died of terminal pneumonia. Ten had general edema, two died of uremic convulsions; one patient having acute suppression of urine died following a decapsulation; one had associated acidosis. The point to be noted is that in none of the cases of the hemorrhagic type without edema did the patients die in the acute stage of the disease. In the group of twelve chronic cases, eight had albuminuria, four did not. In the urine of two patients, seen two years after discharge, a few red blood cells were found under high power. James believes that many patients with mild chronic nephritis recover. Diseased portions may recover even if there is considerable degeneration, and neighboring portions of the kidney may hypertrophy and carry on the extra work. In other words, an anatomically imperfect kidney can function efficiently. Many children will stand severe infections without acute exacerbations of nephritis, but they are more prone to follow upper respiratory infections. For this reason all foci of infection should be treated, such as diseased tonsils, carious teeth and otitis media (acute or chronic). They act as a reservoir of toxic material which the kidneys drain.

The perambulating dental clinics of the U. S. Public Health Service have proved that poor health makes poor chewing; and that poor chewing makes undernourishment and poor health. Particularly it urges that the "six year molars" of children should be watched. These are not the last of the first teeth, but the first of the last; and once gone they can never be replaced.



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BOOK REVIEWS

PRINCIPLES AND PRACTICE OF INFANT FEEDING, by Julius H. Hess, M.D., Professor and Head of the Department of Pediatrics, University of Illinois College of Medicine; Chief of Pediatric Staff, Cook County Hospital; Attending Pediatrician to Cook County, Michael Reese and Englewood Hospitals, etc., Chicago. Illustrated. Second Revised Edition. Cloth, pp. 343. Price, $2.50. Published by F. A. Davis Co., Philadelphia.

This condensed little volume is a veritable treasure-box of practical facts concerning the subject of infant feeding. Certainly it more than justifies the author's purpose in getting away from the too voluminous text-books on this branch and is worthy a place in the library of every physician who feeds babies.

The changes incident to the second edition consist mainly in the recasting of the chapter on "Artificial Feeding" so as to establish as a basis for diets the coloric needs of the infant per pound of body weight of fat, carbohydrate, salts and water.

One might criticize the method of presentation of the subject of "relative acidosis" wherein the statement is made that the "acidity of the blood" was found to be increased. However, it is probably not intended as would seem to be indicated by such statement, except in a relative way, though a better phraseology would be to the effect that the alkalinity of the blood was reduced. This, however, does not detract from the very practical value of the book.

PERSONAL BEAUTY AND RACIAL BETTERMENT, by Knight Dunlap, Professor of Experimental Psychology in the Johns Hopkins University. Cloth, pp. 95. Price, $1.00. C. V. Mosby Co., St. Louis, Mo., 1920.

In this little volume a plea is made for the survival of the fittest from the standpoints of both individual beauty and conservation of the race. The author feels that in the mating of humans beauty plays a far greater part in the selection of the female than the male, and perhaps justly so, though with this quality there must be carried a highly developed sense of responsibility to the state on the part of both parents. Many of the sex problems are dealt with in rather wholesome fashion, particularly as they concern the social unit. All told it is a very interesting, and for the most part, rather logical little treatise.

DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS, by George W. Norris, M.D., Assistant Professor of Medicine in the University of Pennsylvania, and Henry R. M. Landis, M.D., Assistant Professor of Medicine in the University of Pennsylvania, with a chapter on Electrocardiograph in Heart Disease, by Edward Krumbhaar, Ph.D., M.D., Assistant Professor of Research Medicine in the University of Pennsylvania. Second Edition, Thoroughly Revised. Octavo Volume of 844 pages with 433 illustrations. Philadelphia and London: W. B. Saunders Company, 1920. Cloth, $8.00 net.

As stated in the preface to this edition, the exhaustion, in less than two years, of the first edition attests the need for such a work.

New features introduced consist of such subjects as Spirochetal Bronchitis, Influenza, Streptococcus Empyema, Chronic Inflammatory Conditions of the Lungs of Uncertain Etiology, Calcification of the Lungs, Pneumopericardium, etc., together with the recasting of considerable of the original text.

One of the most interesting chapters in the book is that on syphilis of the lung, a condition formerly considered relatively rare, but since the more universal application of the Wassermann test, found to be much more common than was formerly considered. A very practical point in the differential diagnosis between this condition and that of pulmonary tuberculosis, although not an infallible one, lies in the location of the lesions, viz., that syphilis usually attacks first the structures at the hilus and base of the lung, while the site of predilection for tuberculosis is commonly the apex. Indeed the work is full of just such practical suggestions and forms a most useful guide in that field for which it is intended.

An occasional typographical error was encountered.

SYPHILIS, DIAGNOSIS AND TREATMENT, by Loyd Thompson, Ph.B., M.D., physician to the Syphilis Clinic, Government Free Bath House; Visiting Urologist to St. Joseph's Hospital; Consulting Pathologist to the Leo N. Levy Memorial Hospital, Hot Springs, Arkansas. Second Edition, revised. Lea & Febiger, Philadelphia and New York. Cloth, $7.00.

No physician's library is complete without a late book covering the diagnosis and treatment of syphilis, and for the reason that such startling advances have been made in the knowledge of syphilis during the last few years. As the author well says, "The disease is no longer considered a genito-urinary disease, nor a dermatological disease, nor a disease belonging exclusively to any specialty; but it is to be thought of as a disease requiring knowledge in all fields of medicine." In the present volume an effort has been made to present the subject of syphilis in as practical a manner as possible, and accordingly a large portion of the book has been devoted to diagnosis and treatment. The chapter on Laboratory Diagnosis is made especially full, as today the desirability, in fact the necessity, of laboratory aid is more evident for the successful treatment of syphilis than for any other disease. The chapters on visceral syphilis have been rewritten, and contrary to the teaching of the previous editions, the luetin test is considered of little or no practical value and hence the section dealing with the subject has been greatly condensed.

All in all the book will be found to be a reflection of the latest and most approved facts concerning syphilis and we heartily recommend it.

PRACTICAL MASSAGE AND CORRECTIVE EXERCISES, WITH APPLIED ANATOMY, by Hartvig Nissen, President of Posse Normal School of Gymnastics; Superintendent of Hospital Clinics in Massage and Medical Gymnastics, etc. Fourth revised edition. F. A. Davis Company, London. Cloth, $2.00.

The popularity of this book is attested by the demand for the fourth edition. This new edition reports the results of what the author says is forty-five years of study and experience, practical and teaching a practical way to treat suffering humanity with mechano-therapy. The fact that the author has for twenty-four years been instructor and lecturer of massage and Swedish gymnastics at the Harvard University summer school, and also formerly was an instructor of physical training at Johns Hopkins University, is quite sufficient to stamp the author as a man of ability in his special field, and indicates the application of the work of the masseur as an aid in the treatment of the sick. The author very plainly states that he does not practice medicine, nor pretend to practice medicine, but claims to be a specialist in massage and corrective exercises which he gives in cooperation with members of the medical profession.